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NO ONE pretends that we have as yet either a national architecture or national music in America; unless our Yankee clap-board house be taken as a specimen of the first, and "old Susannah" of the second, fine art. But there is, on the other hand, perhaps, no country where there is more building or more "musicianing," such as they are, at the present moment. And as a perfect taste in the arts is no more to be expected in a young nation, mainly occupied with the practical wants of life, than a knowledge of geometry is in an infant school, we are content with the large promise that we find in the present, and confidently look forward for fulfilment to the future.

In almost every other country, a few landlords own the land, which a great many tenants live upon and cultivate. Hence the general interest in building is confined to a comparatively small class, improvements are made in a solid and substantial way, and but little change takes place from one generation to another in the style of the dwelling and the manner of living.

But in this country we are, comparatively, all landlords. In the country, especially, a large part of the rural population own the land they cultivate, and build their own houses. Hence it is a matter of no little moment to them, to avail themselves of every possible improvement in the manner of constructing their dwellings, so as to secure the largest amount of comfort, convenience, and beauty, for the moderate sum which an American landholder has to spend. While the rural proprietors of the other continent are often content to live in the same houses, and with the same inconveniences as their forefathers, no one in our time and country, who has any of the national spirit of progress in him, is satisfied unless, in building a new house, he has some of the "modern improvements" in it.

This is a good sign of the times; and when we see it coupled with another, viz., the great desire to make the dwelling agreeable and ornamental, as well as comfortable, we think there is abundant reason to hope, so far as the country is concerned, that something like a national taste will come in due time.

What the popular taste in building seems to us to require, just now, is not so much *impulse* as right *direction*. There are numberless persons who have determined, in building their new home in the country, that they "will have something pretty;" but precisely what character it shall have, and whether there is any character, beyond that of a "pretty cottage" or a "splendid house," is not perhaps very clear to their minds.

We do not make this statement to find fault with the condition of things; far from it. We see too much good in the newly awakened taste for the Beautiful, to criticise severely its want of intelligence as to the exact course it should take to achieve its object—or perhaps its want of definiteness as to what that object is—beyond providing an agreeable home. But we allude to it to show that, with a little direction, the popular taste now awakened in this particular department, may develop itself in such a manner as to produce the most satisfactory and beautiful results.

Fifteen years ago, there was but one idea relating to a house in the country. It must be a Grecian temple. Whether 20 feet or 200 feet front, it must have its columns and portico. There might be comfortable rooms behind them or not; that was a matter which the *severe* taste of the classical builder could not stoop to consider. The roof might be so flat that there was no space for comfortable servant's bed-rooms, or the attic so hot that the second story was uninhabitable in a mid-summer's day. But of what consequence was that, if the portico were copied from the Temple of Theseus, or the columns were miniature imitations in wood of those of Jupiter Olympius?

We have made a great step onward in that short fifteen years. There is, to be sure, a *fashion* now in building houses in the country—almost as prevalent and despotic as its pseudo-classical predecessor, but it is a far more rational and sensible one, and though likely to produce the same unsatisfactory effect of all other fashions—that is to substitute sameness and monotony for tasteful individuality, yet we gladly accept it as the next step onward.

We allude, of course, to the Gothic or English cottage, with steep roofs and high gables,—just now the ambition of almost every person building in the country. There are, indeed, few things so beautiful as a cottage of this kind, well designed and tastefully placed. There is nothing, all the world over, so truly rural and so unmistakeably country-like as this very cottage, which has been developed in so much perfection in the rural lanes and amidst the picturesque lights and shadows of an English landscape. And for this reason, because it is essentially rural and country-like, we gladly welcome its general naturalization, (with the needful variation of the veranda, &c., demanded by our climate,) as the type of most of our country dwellings.

But it is time to enter a protest against the absolute and indiscriminate employment of the Gothic cottage in *every* site and situation in the country—whether appropriate or inappropriate—whether suited to the grounds or the life of those who are to inhabit it, or the contrary.

We have endeavored, in our work on "COUNTRY HOUSES," just issued from the press, to show that rural architecture has more significance and a deeper meaning than merely to afford a "pretty cottage," or a "handsome house," for him who can afford to pay for it. We believe not only that a house may have an absolute beauty of its own, growing out of its architecture, but that it may have a relative beauty no less interesting, which arises from its expressing the life and occupation of those who build or inhabit it. In other words, we think the home of every family, possessed of character, may be made to express that character, and will be most beautiful (supposing the character good,) when in addition to architectural beauty it unites this significance or individuality.

We have not the space to go into detail on this subject here; and to do so would only be repeating what we have already said in the work in question. But the most casual reader will understand from our suggestion, that if a man's house can be made to express

the best traits of his character, it is undeniable that a large source of beauty and interest is always lost by those who copy each other's homes without reflection, even though they may be copying the most faultless *cottage ornée*.

We would have the cottage, the farm-house, and the larger country house, all marked by a somewhat distinctive character of their own, so far as relates to making them complete and individual of their kind; and believing as we do, that the beauty and force of every true man's life or occupation depend largely on his pursuing it frankly, honestly, and openly, with all the individuality of his character, we would have his house and home help to give significance to, and dignify that daily life and occupation, by harmonizing with them. For this reason, we think the farmer errs when he copies the filagree work of the retired citizen's cottage, instead of showing that rustic strength and solidity in his house which are its true elements of interest and beauty. For this reason, we think he who builds a simple and modest cottage in the country, fails in attaining that which he aims at by copying, as nearly as his means will permit, the parlors, folding doors, and showy furniture of the newest house he has seen in town.

We will not do more at present than throw out these suggestions, in the hope that those about to build in the country will reflect that an entirely satisfactory house is one in which there are not only pretty forms and details, but one which has some *meaning* in its beauty, considered in relation to their own position, character and daily lives.

EXPERIMENTS IN HORTICULTURE, NO. IV—GRAPES.

BY B., POUGHKEEPSIE, N. Y.

For the last ten years, I have had under cultivation from three hundred to five hundred grapevines. They comprised about twenty varieties originally, but have dwindled down to three, viz., the *Catawba*, *Isabella* and *Elsinburgh*. I still retain specimens of the best foreign grapes; but it is labor lost to attempt to produce fruit from them, in any quantity, in the open ground. The *Catawba* I esteem most highly, especially for wine. The Isabella is preferred by many as a dessert fruit, although my taste inclines to the former. The Elsinburgh makes a good wine, and is the most hardy of them all. Indeed, this last was the only variety which passed unscathed through the excessively cold winter of 1848-9.

Without attempting to detail the various modes of planting and training which have been tried, I will merely state that which has proved most satisfactory. Take vines one or two years old, in the *spring*, and plant them in rows running north and south; the rows to be *six* feet apart, and the vines *eight* feet apart in the row. Within a year or two, at your leisure, prepare posts with bottoms of locust and tops of pine fence railing, seven and a half feet in length, and set one equi-distant between every two vines in the rows, so that they will stand five and a half feet in height. Then procure galvanised wire, No. 12 or 13, and having bored five small holes through each post at distances of eleven inches, pass the wire through, draw it tight and fasten each end. The upper wire is to rest on the top of the posts, and be fastened by staples. Then paint your posts, and brace those at the extremities of the rows, to enable them to bear the weight, and you will have the foun-

dation of a vineyard which will endure for at least one generation.

I planted one hundred vines in this manner several years ago, and I am satisfied that I cannot improve upon the mode. The distance is ample, as it gives forty-eight feet surface for the roots of each vine, and nearly the same space of trellis for the fruit. The wire, being galvanised, will not rust; it makes no shade, and affords a convenient support for the tendrils to cling to. The rows, running north and south, give a fair proportion of sun to each side. The bottom of the posts are made of locust, for the sake of durability, and the tops of pine, for the sake of convenience in attaching the wires, and are painted to preserve them and improve the appearance. A considerable saving of expense can be made by *painting* the wire white, which can be done very rapidly by taking a coil and spreading it over a paling, or stick thrust through it, and applying the paint with an ordinary brush. The paint will preserve the wire many years.

Having thus planted my vineyard, I first proceed to train from each vine two horizontal arms along the lowest wire. At the next autumnal pruning these arms are shortened to four feet in length, and are always thus kept between two posts. After this I train from each arm four upright shoots gradually, from year to year, until they reach the topmost wire,—cutting in to one or two eyes the alternate shoots in alternate years. No rule can be laid down on this subject, as to the precise degrees of progression from year to year, as it depends much upon the vigor of each vine. The common error is to leave too much wood. It is an easy matter to cover one hundred square feet with a vine five years old; but it is perfectly certain that if properly confined to *one quarter* that space, it will produce a much more valuable crop of grapes. I have no doubt that a vigorous Catawba vine can be profitably confined to forty square feet of trellis for thirty years or more.

In regard to pruning, which is the *great art* in the cultivation of this fruit, I have recently modified my views, and am gradually changing my practice. I find that the old notion, that spring pruning would cause vines to *bleed* to death, is entirely incorrect. I have pruned freely during the month of May of this year, as well as formerly, without the slightest injury. The advantage gained, is that you can prune after your fruit buds open, and show how many bunches of grapes they can produce. You can then cut down to the proper number of bunches for the strength of your vine, which is the true principle of pruning.

My general practice for the last five years has been to prune in November, and lay down the vines and partly cover them with earth or litter. This last precaution is taken to prevent the winter from pruning them a second time. For I had, on one or two occasions, lost nearly all the fruit buds between the knife and the frost.

The importance of severe pruning to insure first rate fruit, cannot be too strongly urged. A vine, even of the hardiest sort, if left to itself, will soon become worthless. An experiment was tried by a near neighbor, at my suggestion, a few years ago, upon a young Isabella vine of great beauty and vigor. It was trained upon an arbor, and in June showed two hundred bunches of fruit. The grapes continued to grow and look as well as mine, until the middle of July, when they began to fail. The result, in short, was that not a single bunch of grapes ripened, and for a year or two after the vine showed but small signs of life; and after a lapse of about seven years, and having been headed down to recruit its energies, it has not yet recovered from the shock. The only safe rule that I can adopt, is to direct my gardener to prune very closely in the fall, and then follow him

next spring, and cut out one-half of the eyes he has left.

In regard to preparing and manuring the ground, my experience does not accord with the rules laid down in the books. I have tried deep trenching, bones, sods, &c., according to the most approved directions; but I have not yet perceived the slightest beneficial results. On the contrary, my best grapes come from an ordinary soil of about one foot in depth, kept well manured by *street sweepings*, which I deem a *specific* manure for *all* kinds of fruit. The explanation may, perhaps, be found in the fact that my soil is a heavy loam with a clay subsoil, into which it is not beneficial for grape roots to penetrate. At all events, mine do best near the *surface*. My *strongest* growing vines have been very heavily manured with coal ashes.

Two years ago my Catawba grapes were much injured by the *rot*. In the autumn I covered the ground with ground *plaster*, at the rate of five pounds to a vine, and have not since been troubled in that way.

Last year I made a great variety of experiments in wine pressing,—beginning with cherries, and ending with quinces. Among the rest, I pressed about a ton of grapes, which yielded about six gallons to the hundred pounds. The *modus operandi* was substantially the same as that so well described by Mr. Longworth in a recent number of the Horticulturist, except that my grapes were not separated from the stems, and we added one and a half pounds of loaf sugar to a gallon of juice.

It does not, perhaps, become me to say much in regard to the quality of the wine; firstly, because I do not profess to be a judge—of wine, I mean; secondly, because I could not be deemed an *impartial* one. All I shall say is, that according to the taste of those who have tried the Catawba, it is considered as good, and quite as pure, as any foreign wines brought to this market. If, however, I can find an express to forward a basket, the editor shall have an opportunity of testing the the matter in *propria persona*.

Poughkeepsie, June, 1850.

Our correspondent's article is full of excellent practical suggestions, based, as usual, on actual experience. We hope it will lead others to favor us with their views on vineyards, which are becoming a somewhat important branch of agriculture. We agree with B. entirely as to the main principles he deduces from his own experiments, viz., that upright trellises, frames or poles, are the best supports for the vines; that the latter should be confined to a very moderate space and severely pruned; and that none but native grapes as yet have proved of much value in the vineyard.

He states very correctly that it is owing to the nature of his soil that *trenching*, ordinarily of the greatest value to the vine, has proved of little benefit with him. If something could be mingled with the subsoil, at the time of trenching it, to render it light and permeable by the air and roots, trenching would undoubtedly prove beneficial. Hence the great value of coal ashes for vines in a heavy soil, though they are nearly useless in sandy ground.

The samples of wine which our correspondent so obligingly sent us, we received in excellent condition. They were pure and sound, and some of them, (especially the Catawba,) of excellent quality. But from the amount of sugar per gallon added to the *must*, they are all *sweet* wines, which we think inferior to the *dry* wines made on the Ohio from the same grapes. Now light dry wines, like Claret and Hock, (the natural product of the Catawba, &c.,) require little or no sugar; and they cost less, and are more wholesome than sweet wines, like Muscatel, Malaga, &c. Ed.

NEUMANN ON RAISING PLANTS FROM CUTTINGS.

PERHAPS the best work on propagating plants by this means, is a little volume published in Paris, entitled "Notions sur l'art de faire les Boutures," by M. Neumann, the well known chief of the hot-house department of the Garden of Plants. We shall give in our succeeding numbers, commencing with the following article, a translation of the most important part of this little work, so useful to the plant cultivator.

No. I. GENERAL CONSIDERATIONS.—The Creator has willed that plants should multiply themselves by their seeds; but man, still more to increase the riches of the vegetable kingdom, as if he found himself in too narrow a compass, incessantly assists Nature, whether he evokes the mysteries of artificial fecundation, or propagates species by grafts, layers, or cuttings. This last method of propagation has arrived at such importance in our days, that I have thought it my duty to to state the nature of the proceedings which practice, and a long study of the numerous plants intrusted to my care, have suggested to me. A cutting, properly speaking, is a part of a plant which, being detached, is placed in the ground, where, under the influence of different circumstances, it ought to develop itself, and produce an individual similar to the parent plant. Monocotyledonous plants will only strike by cuttings from their branches; but dycotyledonous plants offer for propagation, so to speak, all the parts which compose them—roots, branches, trunks, or portions of them, herbaceous shoots, and leaves. With but few exceptions plants struck by cuttings demand constant attention; a temperature and moisture proportioned to the nature of the subject are the conditions which ought especially to engage the attention of the operator; for the principal precaution is, to secure the cuttings at the same time from rotting and drying. With this end in view we keep them in media of equal temperature and moisture; we prevent evaporation of the soil, and arrest the perspiration of the cuttings. Plants which are soft-wooded, or have much cellular tissue, such as Malvaceæ, Geraniaceæ, Solanaceæ, and others, take root more easily, and demand less precaution, than the delicate, resinous, milky, hard and dry-wooded species. Cuttings of the greater part of the hardy ornamental plants suited to the climate of Paris, will strike in the open air, if they are protected from winds and currents of hot air. Others are struck in pots upon exhausted hot-beds, or in a pit not much raised and ventilated. Finally, cuttings of exotics, able to grow only under the influence of a heat which reminds them of the conditions among which they naturally live, strike root in glass-houses made on purpose, or are placed, agreeably to their nature, either in a hot-house or green-house.

No. II. SOIL PROPER FOR CUTTINGS.—Different sorts of trees do not root equally well in all soils. There are some cuttings which can scarcely be made to succeed in saline earth, while others succeed in it very well. The soils considered the best for striking cuttings in the open air, are those which are free, sandy, and soft to the touch; of Fontenay-aux-Roses, for example, of Clamart, or of Massy. Tamarix elegans and T. germanica prosper in a soil rich in saltpetre; but the Gingko and Poplars cannot strike in it; these last succeed at Fontenay-aux-Roses. Cuttings made in glass-houses generally require to be planted in earth mixed with peat in preference to any other, but varied according to the nature of the plant. Whatever composition we use, we must take care not to employ it too dry or too moist; in the first case, the earth not being able to sustain itself in a convenient manner around the cutting, the latter falls or is displaced when we wish to water it; in the second case, the earth being too compact, it hinders the formation of roots; Nature makes vain efforts, and the cutting suffers, decays, and dies, in spite of its disposition to vegetate.

No. III. CUTTINGS IN THE OPEN AIR.—All our deciduous trees, and many evergreens, may be struck from cuttings in the open air, by the same process as that employed in the Colonies, if requisite care be taken. Thus in our Colonies, where there are no glass-houses for propagation, nor bell-glasses, I made cuttings entirely in the open air, in a bed shaded

with straw; these cuttings were watered at random every day, taking no other precaution than that of not disturbing their roots. This simple method, the only one, it may be said, in use in our Colonies, is far from offering the difficulties which present themselves under the latitude of Paris, to secure the striking of the cuttings of plants foreign to our climate. Here, in order to insure success, we take shoots and branches in full vegetation. In the Colonies, the gardener always chooses in preference the wood which has finished its growth. With us, on the contrary, there are plants whose cuttings in our glass-houses do not root unless they are quite soft, and just before the wood begins to assume its natural colour; such are Semecarpus anacardium, Swietenia mahogani, Euphoria lit-chi, &c. These cuttings cannot bear exposure to the air, even for a moment. They must be planted the moment they are taken off, and covered by a bell-glass. However, this treatment will not succeed with milky, gummy, or resinous plants, such as Vahea gummifera, Araucaria, Euphorbia, &c., whose cuttings, if placed in the earth as soon as they are taken off, seldom root, but almost always rot. Such cuttings secrete from their wounds a peculiar matter, which must be discharged before they are planted. For this purpose I put them upside down in pots; I then fill the pots with rather moist earth, without pressing it in, leaving the wound alone uncovered. I leave them 24 or 36 hours, and sometimes more, in this position, until the superabundant matter which they contain is thrown off. I then wash the wound with a sponge, and the cutting takes root more or less easily, in proportion as the wound is clean. I know no tree from which we may make cuttings in the open air, with herbaceous shoots, without a bell-glass; but those herbaceous plants which have some appearance of wood, such as the Pelargonium, Geranium, Cineraria, and Calceolaria may be made to strike without heat, and under the shade of a wall. These cuttings are shaded with straw mats during the day; however, they always succeed best in a cool frame. In order to make the plants which I have just named strike by cuttings, we commonly take the extremities of the branches after flowering. The soil which suits them best is peat mixed with well rotted animal or vegetable mould. Among Roses, the China, being the hardiest, is propagated by cuttings in peat soil, with wood one year old; the other sorts strike in a hot-house, and under a bell-glass, for which purpose choice should be made of herbaceous shoots, taken from plants which have themselves been kept in a green-house.

No. IV. Cuttings upon exhausted Hot-beds.—There are some plants which cannot be multiplied effectually in the open ground, and which require a mild and uniform heat, in a still atmosphere, liking, however, a little light, which should be given them night and morning. The temperature which suits such plants when under propagation, is that which is found under the glass of an exhausted hot-bed. After we have permitted this bed to lose its greatest heat, we put over it a low frame; the pots containing the cuttings are then plunged in the soil of this bed. In this way we successfully propagate Diosmas, Fuchsias, Heaths, single Camellias intended for grafting on, and similar plants.

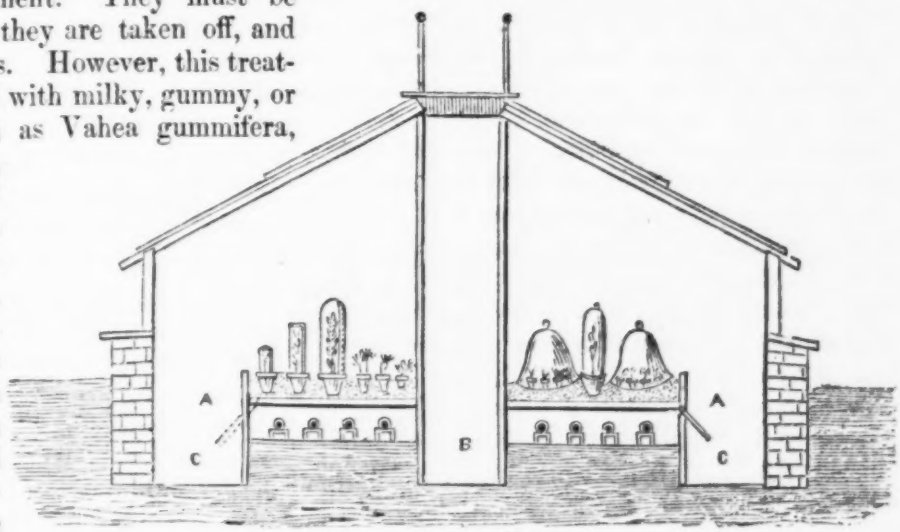

Fig. 1.—*Propagating House.*

No. V. Cuttings in Propagating Houses.—But the exhausted hot-bed is suited only to a limited number of species of plants. Many plants, even oranges, would not find there a heat sufficient to enable them to make roots. Plants whose nature it is to grow

under the influence of a high temperature, are struck in propagating houses built on purpose, in which an equal temperature is maintained day and night. This indispensable condition, which has always been an object of great care among gardeners, has now become much more easy to fulfil, in consequence of the use of hot-water pipes. The flooring of the frame under which the hot-water pipes pass, is covered to the depth of 4 or 6 inches with sand or tan; the pots for cuttings, which are plunged in it, are subjected to a heat of from 30° to 35° Cent. (87° to 98° Fahr.) for cuttings of such plants as, from the difficulty of striking them, require a high temperature, as for example Xanthochymus, Myristica, Guayacum, Diospyros, Mangifera, &c. Annexed is the section of a glass-house for propagation, such as I should recommend for striking cuttings in. Two pits, AA, are placed on each side of the principal walk B; CC are two walks all round, for the use of the gardeners. The flooring of the pits ought to be covered with sand or tan 4 or 6 inches thick, before receiving the cutting pots. Hot-water pipes pass under these floors and heat the material in which the pots are placed, as well as the pots themselves, and then discharge their heat into the air of the house by means of trap-doors placed on hinges, and opening on each side of the pits; by which we may regulate the surrounding temperature of the house. The dimensions of such a house would vary according to circumstances; we must only bear in mind that the cuttings ought to be as near the glass of the house as possible. The plan of this house, as here figured, represents an interior 4 yards wide, of which $1\frac{1}{2}$ yard is employed for the walks; but if the house to be constructed is to be narrower—3 yards wide, for example—a single walk in the middle might be managed. In a well-constructed propagating house we may strike cuttings all the year round.

No. VI. Pots for Cuttings.—The pots which we choose for cuttings are about $3\frac{3}{4}$ inches wide at the top; we prefer pots with small bottoms, so that when we turn them up to ascertain if the cutting has rooted, there is nothing to stop the ball from coming out. I submitted to the Horticultural Society of Paris, some time ago, a model of a cutting-pot which has since been common. I am glad to have made it known, because it has contributed to the success of this part of horticultural science, which is now so generally appreciated. Fig 2, A, is an earthen pot, $2\frac{1}{4}$—$3\frac{1}{2}$ in. broad, and $2\frac{1}{4}$—$2\frac{1}{2}$ in. high; in the bottom there is a hole as in a common pot; this opening must not be obstructed by a crock, as is the custom, but we invert inside a little pot, whose bottom ought to be level with the earth in the pot, as in the cut. This little pot is to receive the heat. The hot effluvium of the tan, or the heat developed by the hot-water pipes, enters the hole of the earthen pot, lodges in the pot which is inverted, and keeps the cuttings, which are planted circularly around it, in the condition most favorable to their vegetation; this arrangement presents also a real advantage, viz., that the roots of cuttings do not force themselves one on the other, as in the old methods; they may easily be separated afterwards.

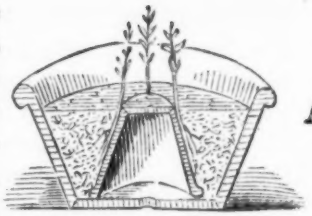

Fig. 2.—*Pots for Cuttings.*

No. VII. Bell-glasses for Cuttings.—The green bell-glasses called Melon bell-glasses are generally used for propagation·

Fig. 3.—*A Melon Bell-glass.*

but recent and repeated trials, and frequent observation, have given the preference to the use of blue and violet coloured glasses, as being more favorable for the striking of cuttings. I give here the forms of the glasses used in the green-houses of the Museum of Natural History. Fig. 3 is a Melon bell-glass; it is useful, inasmuch as it serves to cover a good many little pots, and also for Rose-cuttings. Latterly other bell-glasses called angular (*à facettes*) have been in use, constructed in the same manner as hand-glasses; they are made of three different sizes,

an advantage which the Melon-glasses have not, nearly all of them being blown of the same diameter. Fig. 4 is a long cylinder, intended to receive cuttings of large size. Fig.

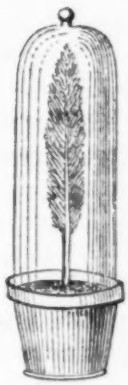

Fig. 4.

Fig. 5.

Fig. 6.

5 is a wide but low cylinder, under which you can place cuttings of small size, such as Heaths, Leschenaultias, Epacris, &c.

When it is required to propagate a delicate and valuable plant, the striking of the cuttings will be more certain, if we place each separately under a single glass with a flat head, as in Fig. 6, and which corresponds in height to the length of the cutting. This glass should be placed upon the pot in such a manner that it excludes all communication with the exterior air; this may be done by not leaving any empty space between the glass and the edge of the pot.

It is to be remembered, that when we propagate under bell-glasses, we must always proportion the size of the cylinders to the quantity of the cuttings, and their strength: thus, a small cutting should not be covered by a large glass; and in this last it will not grow so well alone as when there are many others. The process of striking cuttings seems to be certain in proportion to the smallness of the space in which they are to grow.

No. VIII. Cuttings of Monocotyledons.—We have thought till now that cuttings of Monocotyledons were very difficult, if not impossible, to strike. I am convinced, from observations and repeated trials, that plants of this numerous class are among the most easy to multiply by cuttings of the branches. Experience has taught me that these branches of Monocotyledonous plants should be taken from wood of one year old or less, and that they root as well when they are 5 or 6 years old; but herbaceous cuttings, as well as cuttings of roots, never succeed; which is the more remarkable, because in Dycotyledons the contrary is the case. I successfully multiply from cuttings of branches, Dracæna, Freycinetia, Vanilla, and many others.

Cuttings of Monocotyledons should be made with all their leaves, for it takes some time to replace these if they are cut off; however, there are some species whose lon leaves are difficult to place under glasses. We may remedy this inconvenience by turning the leaves back along the stalk, a position which we maintain by tying them as may be requisite, as is shown in Fig. 7. Cuttings disposed in this manner seldom rot.

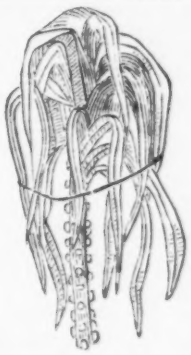

Fig. 7.—*Branch of Dracæna umbraculifera prepared for a cutting.*

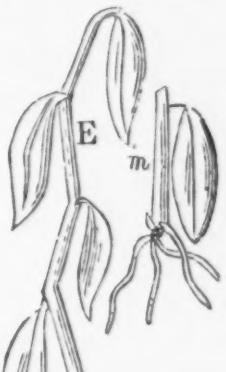

Fig. 8.

The operation consists in cutting away, for about 1-5th of an inch from their point of attachment, the leaves at the bottom of the cutting, all the length of the portion which is to be buried. It is not always necessary to take the extremities of branches for cuttings of this sort. If cut into pieces they succeed nearly equally well; it is thus that I multiply the Vanilla, in cutting the branch into pieces having two eyes each, as would be the case if the accompanying branch were divided at E, Fig. 8, keeping as near as possible to the point of attachment of the leaf, and taking care not to hurt the shoot in its axil. Fig. 8, *m* shows the lower end of a stalk from which the leaf has been cut, and the appearance of such a cutting when it is rooting.

No. IX. Cuttings of Dicotyledons.—I have always had reason to think that there is not a Dicotyledonous plant which may not be multiplied by cuttings, either of the roots or stems; by herbaceous shoots, or even by detached leaves.

Cuttings by Roots.—Cuttings by roots, although long known, are not generally used by our better horticulturists; this mode, however, seems sufficiently efficacious to fix the attention of those who study the art of multiplication. I have several times had occasion to mention the case of Dais Cotinifolia. The roots of this plant, cut into small pieces, and spread on the earth of a pot in a hot-house, gave as many young plants as there were pieces of the root. I do not doubt that we may succeed in making cuttings of the soft wood of the Dais equally well; but I have never succeeded with the branches when the wood is hard.

I have already said that Paulownia imperialis may be struck from herbaceous cuttings produced in a green-house; the manner of striking cuttings of the root of this tree is not less easy. Portions of the roots which vary in diameter from $\frac{1}{4}$ to $\frac{3}{4}$ of an inch, and in length from 1 to $2\frac{1}{2}$ inch, take root well. The month of March is the most favorable time for striking these cuttings; for in February they often rot, and the greatest care is necessary to save them. The first seed Paulownia which I sowed having only produced me one individual, I perceived that this plant when kept in the pot produced so few buds as to deprive me of all hope of multiplying it quickly. This led me to try cuttings from the roots, which perfectly succeeded, as the innumerable plants now seen in the nurseries sufficiently prove. The shoots of a Paulownia, struck from root cuttings, came out round the root, as is seen in Fig. 9, N.; this method of proceeding gives us the facility of splitting the roots into several pieces, which, separately, strike as well as an entire root, Fig. 9, O. When the shoots, which are developed upon the root, have attained a length of an inch, or an inch and a quarter, we cut them above the two first leaves which appear; the detached portions are the cuttings, which are placed in a propagating pot, just sufficient to keep them upright, taking especial care that the earth is not too dry. When the cuttings have once taken root, and attained some vigor, we cut off the head, which we again place in the earth; thus we obtain two plants from the cuttings, both of which will form trees. During this time the root of the Paulownia gives other buds, which are subjected to the same operation; but it is useful, in order to draw the sap, to allow a bud to remain upon it, which at a later period, if left to itself, forms a stronger plant than the others.

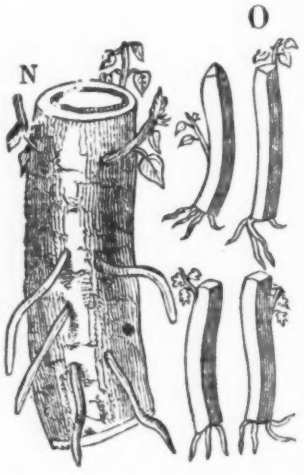

Fig. 9.—*Cuttings of a Paulownia imperialis.*

As soon as we perceive that the last cuttings of which I have just spoken have taken root, we place them in a larger pot, and these pots are placed in the green-house, in a spot the least exposed to currents of air; the young plants will flag a little, but they soon recover. When they have begun to vegetate, we take them from the green-house and put them in a half shaded cold frame, where a little air is allowed to enter if the sun is too hot; we thus accustom the Paulownia to support the rays of the sun and the action of the air; and, as soon as we think the cuttings sufficiently strong, we plant them in the open ground. All these successive operations take place so quickly, that a cutting made in March, and which is 4 inches high when it is first planted in the open air, attains by the following autumn the height of 1 foot or more, supposing that it has been planted in a soil suitable to its nature, and has been sufficiently watered.

No. X. There are other plants whose roots send out, contrary to the Paulownia, their buds upon the cut itself; this is remarked in Maclura aurantiaca, Fig. 10. They are formed between the wood and the bark by an innumerable number of exceedingly minute bulbs, which turn green and produce the buds. The cuttings of this plant strike very easily in the open air, following the same method of proceeding as in Paulownia; the large end of the root must be placed even with the earth or nearly so.

The Cydonia japonica is only multiplied by layers. The difficulty which this method offers for striking has not permitted this plant, up to the present time, to be as much distributed in ornamental gardens as it ought to be. But if we strike from the roots, results will be obtained much better and expe-

ditiously. If we cut the roots the size of a pen, into pieces 2 or 2½ inches long, and plant them upright, we shall have the same year as many plants as there were pieces planted. These cuttings should be made in the open air, along a border or strip of peat, without any other covering than the soil where they are to grow. If we plant them vertically, we should cover them very slightly with earth; and at the first watering the cut will be uncovered. If we place them horizontally, they should be covered with earth about one-sixteenth of an inch deep. This last method succeeds equally well, but it is less certain than the first.

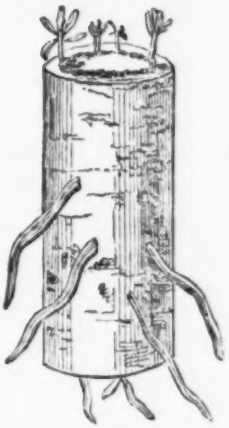

Fig. 10.—*Cuttings of Maclura aurantiaca.*

I have here mentioned these few species only to show what advantage we may derive from the method of multiplying dycotyledonous plants by cuttings of the roots; the good results which I have just pointed out will encourage, I hope, other attempts of the same nature to be made upon other plants, whose multiplication upon hot-beds has been attended by little or no result.

At the time when I was about to send the present treatise to the press, I discovered a new fact in corroboration of what I have stated, and I feel obliged to publish it. During the last six years, I have many times tried to strike an Araucaria from cuttings of the roots; up to this time, I had had no satisfactory results, but to-day, 10th May, 1844, I perceive that the cuttings of the roots of Araucaria Cunninghami, ¾ inch in diameter, and about 2¾ to 3 inches long, planted in October, 1843, are at last sending forth shoots. I attribute my failure up to this time, to the presence of the glasses with which I covered the cuttings: the concentration of air charged with an excess of moisture makes them perish. In the first place, the pots which contained the roots, were, in October last, plunged into tan still impregnated with a gentle heat; perceiving in March that the earth in the pots was decomposed, I changed it, without being able to distinguish the least sign of vegetation on the cuttings. The pots were then placed upon a bench and exposed to a moderate temperature; in April these pots were placed upon a warm bed of tan; and it was this, doubtless, which, to my great surprise, a month afterwards, excited vegetation.

All cultivators who know how to manage the Araucaria will, perhaps, doubt the truth of this phenomenon; but if they are willing to convince themselves by testimony of their eyes, I shall be happy to present them with a palpable proof. The realisation of this remarkable experiment, which nobody, I believe, has before made known, will, I hope, become a fact of great importance both in horticulture and agriculture.

If, as I have reason to believe will be the case, this mode of cuttings by roots succeeds as well upon all the species of the beautiful family of Coniferæ, the new Pines of the Himalaya and of other countries, which would for a long time have remained scarce, may soon be propagated with certainty; and I dare affirm, that the plants raised from cuttings of the roots will form trees as well constituted as those produced from seeds. I am going to follow up my experiments upon Araucaria excelsa, being nearly certain at the outset that I shall obtain the same results as I did upon Araucaria Cunninghami. The autumn does not seem to me the best season for this sort of operation, it ought to succeed best in spring; a close observation teaches us this.

There are some plants which are always kept so much the more scarce, as it has been impossible to multiply them even by the last process; such, for example, as Halesia diptera, of which I have never been able to save a single layer once detached from its parent plant, notwithstanding these layers have been well rooted, and under the constant care of the operator. Likewise, we have never obtained a result of the grafts of Halesia diptera made on tetraptera. However, I have reason to believe that cuttings of the roots will strike. The stock of Halesia diptera which exists in the *Jardin des Plantes*, begins to give fertile seeds. Let us hope that soon we shall be able to obtain from some individuals seed of this beautiful shrub.

EFFECTS OF LOCALITY ON TEMPERATURE.

BY YARDLEY TAYLOR, LOUDON CO., VA.

In the last number of the third volume of the Horticulturist, is a short communication from JAMES GRANT, Davenport, Iowa, giving some account of the cold weather in the previous winter. Mr. GRANT considers it as disproving the opinion of a former writer, that peach blossoms are always killed when the thermometer is 14° below zero. He says "the trees protected by our bluffs will have as much fruit as they can hold. For days, during the winter, the thermometer was 20° below zero. The preservation of our trees was probably owing to deep snows and uniform cold weather." There are so many modifying influences, in respect to cold weather, caused by difference of elevation and exposure, either east or west, the presence of large borders of water, protection by bluffs, or other elevations, &c., that it is difficult to calculate the effect of cold on blossom buds, until ascertained by actual results. Were a series of observations made on such occurrences, in different sections of our widely extended country, giving minutely the situation, difference of elevation of places, and of all other circumstances bearing upon the subject, with the effects in each case, much information might be elicited; and that branch of meteorology would not only be better understood, but the probable effect of different localities for particular fruit trees be ascertained with more certainty.

With this view, I propose furnishing for the pages of the Horticulturist, our experience of the cold of last winter, with a theory of its effects, corroborated by our previous experience. This district of country is peculiarly liable to great changes of temperature, situated as we are in the first valley between the two first ranges of mountains above tide-water, with the Blue Ridge—that great feature in the Apalachian system of mountains of the Atlantic slope—on the west, and one of its spurs—the Catoctin mountains—on the east. This valley has an elevation of from 4 to 600 feet above tide-water, while the mountains rise from 2 to 600 feet above the valley. Such difference of elevation is frequently marked by great difference of temperature, even at the same time. The peaches are often killed by the frosts of spring or the cold of winter, in the lower grounds, while on high situations or on the mountains, they are rarely injured by either. Indeed, in some places a crop may be calculated on with perhaps as much certainty as in any part of our country, where frosts are liable to injure them at all. When the N. W. winds prevail, they bring the air of the Alleghany mountains to us, modified, it is true, by mixing with the air of the valley over which it passes, but still often in winter exceeding cold. A prevalence of south or southeasterly wind in a little time will bring the warm air of the Atlantic or of the Gulf of Mexico, and produce an opposite extreme. Hence, the variations of temperature here are often great. But the thermometer never falls as low in high windy weather, unpleasant as it is, as it does in calm weather, after a snow has fallen. Last winter the snow fell to the depth of several inches, and the clouds passed off without wind, and it continued calm for several days, when one morning the thermometer indicated 14° below zero, and it is probable, from the effect produced, had it been ascertained in our lowest valleys, it would have been much lower. My orchard has a

difference of elevation of about 80 feet, and the peach trees on the lower part did not produce hardly a single blossom, while trees on the highest ground had a good supply of bloom. The small branches of many on the low ground are killed, and even some of the apple trees there are injured, as if by the extreme cold weather. The heart cherries, though on higher ground, have suffered; some of their blossom buds remain undeveloped, and even where the bloom was considerable, there are very cherries to be seen. The morello cherries do not seem to be injured, and the apple trees had a heavy bloom. They are all much later than usual; the peach did not come into full bloom before the 25th of last month, about three weeks behind the usual time. On all high situations in this vicinity, the peaches promise a full crop, while in all low ones, no blossoms were seen.

After examining the effects, the theory seems to be this: When the ground is covered with snow, so as to prevent any radiation of heat from the surface, and the air is perfectly still, the caloric in the air [i. e., the warmer strata of air,] will rise higher and leave the the cold air in the valleys below. This being continued for several days, must produce a great degree of cold there. But had there have been any wind, this separation of the air into colder and warmer strata, would not have taken place near the surface of the earth, for it would all have been mixed up, and have resulted in a uniformity of temperature in all places alike.

In the winter of '34-'5, we had a snow here near eighteen inches deep; the ground was not frozen when it fell, and it continued calm weather, without any wind, for near a week, when one morning the thermometer in low situations fell to 20° below zero, a degree of cold never witnessed here by many of us before. The peach trees suffered severely; many of them were almost killed; nearly all the smaller branches were destroyed, and in low situations they only put out shoots, when they did, far back on the larger branches. In this case a surprising difference of temperature was exhibited on different levels. While the thermometer in the valley near the west side of Catoctin mountain indicated 20° below zero, one at Mt. Gilead, on the mountain perhaps 200 feet above, and only a few miles distant, was only down to zero. And the different effects upon the peach trees in this instance, in the two extremes of level, would seem to confirm such a difference of temperature, for on the mountains they were but little injured.

Another remarkable instance of the same principle, occurred here in the spring of '34. Between the 13th and 17th of the 5th month (May) of that year, we had a succession of frosts that froze the ground of nights, and formed ice of the thickness of window glass. The forest trees were out in leaf, many of them nearly full grown, and with young shoots six or eight inches long, and the peaches were as large as ripe currants. A destruction of fruit was the consequence for that season, and the effect on the forests in some instances was remarkable. I noticed a few days afterwards, in a small valley or ravine near Alexandria, that in the bottom of the valley, and up the sides of the hills to a certain level, the young leaves and shoots were entirely killed, and looked as if scorched by the fire, while above that level they were still alive. This level, in looking up the valley, as there was considerable size to it, reached the bottom of it, and was visible no further, while down the valley it passed along the sides of the hills some distance from their base, and exhibited the fact of many trees that stood below the level of this line, having the leaves and shoots entirely killed on the lower limbs, while those on the higher branches were still alive.

It would seem from the above facts, that a

temperature of 14° below zero was sufficient to destroy the blossom buds of the peach, for the situation of the thermometer was some distance below the line of level where the blossoms were general. And perhaps were the difference of elevation noted in the communication alluded to from Iowa, it might account for so low a temperature not destroying the peach buds there, particularly if the weather was calm. We have noted here, even in summer, that two thermometers, one situated about 40 feet above the other and less than 100 yards apart, both equally exposed, would indicate a difference of 5 or 6°; the lower one would show that much cooler temperature in the morning, while at noon it would show that much warmer. than the other.

I remain thy friend,

YARDLEY TAYLOR

Loudon Co., Va., 5th mo., 1850.

THE ZINFINDAL GRAPE—THE CURCULIO.

BY G. GABRIEL, NEW-HAVEN, CONN.

IN the June Horticulturist, page 568, I am represented to have stated, with two other gentlemen, that the Zinfindal grape is better adapted to out-door culture in Connecticut than the Isabella. This is a mistake. I have never entertained such an opinion.

I have cultivated it several years in a cold-house grapery, where it does well. I have also seen it cultivated in the open air in this city several years. It needs protection in the winter, like the Miller's Burgundy, and the fruit grows in a similar compact manner. In the grapery, it requires severe thinning. Mr. ALLEN recommends taking out eight of every ten berries, which, however, I think, is rather more than I have done. A grape requiring so much attention, would be a source of disappointment if recommended for general cultivation.

I am pleased to notice so many turning their attention to the curculio. I am confident it will have to surrender its claim on the plum. Indeed, it would be humiliating to our superiority—standing at the head of animal creation—should the united pomological forces of the country allow the ravages of this little *impertinent* to continue. I am trying several experiments this season, more simple and easy than the one I reported to you last autumn, of which, if successful, I will send you some notice in due time.

My experiments at present are based upon this simple theory, viz., that the curculio is endowed with sufficient reason or instinct to provide, like other animals, for the continuance of its race, and will deposit its eggs *only* where its young may reach the ground and make their way into it.* If this be true, paving, iron shavings, or a cloth suspended from stakes under the tree, or anything else that will prevent the young from entering the ground, will determine the curculio not to lay its eggs there. A gentleman told me not long since that he had plum trees standing by the side of water, the branches of which hung partly over the water and partly over the dry ground, and that the fruit over the water was never attacked by the curculio, while that over the dry ground was; so that those not liking the other remedies may use

* Any of your readers may call to mind other insects that show the same sort of intelligence. Why does the clumsy parent of the canker worm climb from the ground fifty or a hundred feet, to the ends of the branches of the loftiest elms, to lay its eggs? Why, plainly, that its young may be where young and tender leaves first appear. Who has failed to notice the ingenuity of the honey-bee, building its comb just in that most capacious, and yet most compact form, demonstrated by science to be the most perfect? The forecast and contrivance of many insects elicit our admiration and wonder.

water, if they can. It is not a very numerous army to contend with; a large portion must perish from the egg to the perfect insect. Judge DARLING, (an experienced entomologist,) used to say they deposited about thirty eggs each. Where their marks are numerous, they themselves are but seldom seen. I believe their eggs are deposited during the day, as I have several times caught them in this business. These eggs may be destroyed, i. e., the punctures cut out, with any pointed instrument, and the plum will heal and mature. G. GABRIEL.

New-Haven, June, 1850.

CRITIQUE ON THE MAY HORTICULTURIST.

BY JEFFREYS, NEW-YORK.

YOUR LEADER.—*A Spring Gossip.*—Why, my dear sir, you must have been dreaming when you wrote that mild, flowery, sun-shiny article! for that venerable personage, "the oldest inhabitant," never saw such a spring before. How it may be in your own "Highland garden," I know not; but with us in the city, and so far as I have ventured to to poke my nose into the country, the weather has been a perfect budget of abominations for gardeners and farmers. Even the great Horse Chestnuts, in the church yard of old Trinity, whose roots luxuriate deep among the human dust below, are hardly in full leaf, (May 20,) to say nothing of the Elms and the Maples, the Limes and the Catalpas; while Thorburn, and all the other Hyacinth and flower dealers, are fretting and fuming at the "extr'ordinary cold season," while shivering over their unoccupied counters. However, I shall soon venture out into the fields—even if with great coat and mittens—for the summer won't postpone its arrival, whether warm weather does or not. But thus far there has been no "poetry" in the season, if it exists "in the soul." Even in the latter case, I can't feel it as yet. If I did, I would make an effort to echo some of your bird-throated warblings.

Fruit Culture at the South.—Why, my good Doctor PHILLIPS, will you so misunderstand me? I simply mean to say, that every locality, as a *general rule*, will originate, from its proper seeds, its own best (on all accounts) productions—be they fruits, grains, or vegetables. And so I think is the weight of proof, not that I object to introducing the *better* kinds from other localities, when the desired standard of excellence does not exist at home, provided they may become acclimated and naturalized to answer the purposes; but I would encourage by all means the production from seed of the *best* varieties, which under all circumstances can be depended on for domestic use. Meantime, cultivate the good kinds from abroad that you can successfully.

Hints for raising Seedling Pears.—I wish that some of our American pomologists would go into a systematic plan of producing *new* fruits, as Mr. WALKER suggests. Something might thus be grown, if not superior to the excellent new varieties already originated here, at least *proving* that the thing may be done by *design* as well as by accident, as most valuable kinds have already originated.

A *few words to beginners.*—I have no personal acquaintance with Mr. BEECHER; but I never saw an article of his on the garden, or its fruits, but was worth a year's subscription to any paper which such an article adorned. He is here, as always, to the point exactly. Of all things, do I love to hear people talk

straight out, as they mean. Each word of this extract will be felt as living truth by every *real* gardener in the land. Why, it would tire me to tell you, and you to hear me, of the thousand and one duplicate, triplicate supplies of plants, and shrubs, and flowers, that I have yearly given away—(I like to give away things that I can well spare, to those who will *care* for them)—until my patience was exhausted, to those negligent, gossipping people, who are eternally begging and never caring for whatever they get. No; this is *not* charity. I *have* begged things myself—now and then; but I always feel ashamed to do it, for fear some mishap might occur to them; while there are your regular, systematic beggars—and folks who profess to be *somebody*, too—that are a pest to all good neighborhoods. But Mr. BEECHER has given the whole story so well that I'll not add another word.

The Yellows caused by an insect.—If Miss Morris *be* in error in her suggestions of the "insect causing the yellows," we will thank her for her keen observations in entomology. Would that many others of our lady cultivators would spend their leisure hours in speering the ills our fruits are heir to, and give us the results of their discoveries. A new and valuable fund of knowledge would thus be opened to us. I trust her graceful pen will be often found among your pages.

The Poetry of Trees.—Welcome, hearty old CHRISTOPHER! The "banks and braes of bonny Doon," the "castled crags," or the Highland locks which immortalize his beloved Scotland, are as familiar to him as the clustered beauties of his own retired cottage grounds at Villeray; and all, as native to the discourse of his charming pen as the lectures from his professor's desk in Edinburgh, or the *Noctes Ambrosiana* from his chair editorial in Blackwood.

What a mine of wealth, in all that associates a country with what is bright, and beautiful, and classic, and interesting, is such a man as John Wilson! Perhaps no other land can boast two men, who have, coupled with acquirements and productions of the highest order in their several callings, shed such a halo over the several characters of their country, as Sir Walter Scott and Professor Wilson. And now, that you have given this most beautiful "Rhapsody" of the latter, it would, at a fitting time, be equally edifying to reprint, in part, or in whole—for it is too long for a single number—Sir WALTER'S admirable essay alluded to by the Professor. Although not, perhaps, of general application throughout our country, it is full of valuable suggestions to all tree-planters, and would be read with surpassing interest by many of your subscribers.

Design for an octagon house.—"There is nothing new under the sun!" said the wisest of men. But SOLOMON, we venture to say, had never then seen an octagon villa. If he had, I have little doubt it would have been the subject of a special chapter in the records of his wisdom!

The story is told of a spectator at the feats of an eastern juggler, that when, on the accidental explosion of one of his pyrotechnics the audience were blown out of the building, the poor fellow looked up in utter dismay from amid the rubbish aroudd him, and asked what was to be the next part of the performance. This octagon, I take it, is one in the series of *building* performances. I sha'nt talk about this house.

Overgrown catalogues.—This article was written in London, but would be equally applicable, were it written at Boston, New-York, or Philadelphia. Let any one take up a great many of the printed catalogues and advertisements of an American nurseryman, and he would require a special interpreter to select the kernel of wheat from the bushel of chaff

there presented him. I am not disposed to be too severe upon the good proprietors of many of our popular nurseries, who seem to be thus actuated by a vain spirit of rivalry, but I fancy that if called upon to furnish specimens of *all* the choice and various samples advertised, they would be sadly puzzled to give the originals. Some rare stories might be told of these matters, if the various applicants for fruits, plants, and flowers, would but tell their experience.

I wish that the whole fraternity of nurserymen in our country would read and apply the advice of this article; and then, instead of an array of sounding names, which tend only to bewilder and mislead the uninitiated, our practical fruit proprietors could rely on something tangible and to the purpose, for their wants; for I now venture to say, that nearly, if not quite one-half of the articles sent from them prove nearly worthless, or have to be reworked by the cultivator, before he can derive any benefit from them. This should be a subject of action in your next pomological congress; and it only requires a little moral courage and independence to reform what is fast getting to be a crying abuse in our fruit propagation. The public will, most certainly, respond to it, and the nurserymen will as certainly find their account in it.

Agricultural improvements.—I have known a man pay fifty guineas for one of Morland's horse pictures, or Landseer's cattle pieces, to hang up in his hall or parlor, that had no more true knowledge in the originals from which they were painted, than an Esquimaux Indian has of growing pineapples. Of this class is *not* LEWIS G. MORRIS. *He* loves not only the *pictures* of fine cattle, to adorn his dwelling, but is enthusiastically fond of the animals themselves—to keep and propagate them in all their purity and excellence, as well as to embellish his park and lawns with such living ornaments.

I am very thankful that you have inserted this notice in the Horticulturist, as it has given me an opportunity to touch a subject that I should hardly have ventured to introduce by itself into your paper. But it is one as intimately connected with the *furnishings* of a complete genteel country residence, as any other—more so, in fact, than almost any beyond the immediate decorations of the pleasure grounds and buildings, because of its great utility, in example to the country at large, as well as the beautiful living pictures that nothing else will supply.

In Great Britain, where they *understand* these things—where they are educated to it—where every *accident* of fortune does not assume to give law, and tone, and sanction to taste and fashion in country life and residence—this matter is carried out as it should be. There, no genteel country establishment, where any considerable number of acres are embraced, is complete without its Southdown, Leicester, or Cotswold Sheep; its Shorthorn, Devon, or Alderney Cattle, to crop the grass in its lawns and parks, and give those delightful living touches, without which the landscape is bare and wanting. But how many in this country, amid all the extravagant outlay, worse than useless in many cases, have the taste and discrimination to do it? HENRY CLAY of Ashland, DAN'L WEBSTER of Marshfield, have done so, and many other gentlemen of less note, but perhaps of more wealth, and others of less, have done so, and in this have shown their true taste and patriotism, a source of pleasure and gratification to themselves as great as any other; but as a rule, we Americans are the veriest clod-hoppers in existence, in our skill and knowledge of many varieties of fine domestic animals. And yet, those gentlemen are often the subject of ridicule for their vulgar predilection (!) in thus indulging an exalted taste, to the "'cuter" multitude who affect a superior appreciation of gentility!

Nor are our American women—yes, JOHN QUINCY ADAMS says "women"—a whit behind our men, in their squeamish notions of country gentility, who would probably *die* of a thick shoe, if obliged to wear one! In a past paper, you gave an extract from the late Mr. COLMAN, in the portrait of an English Duchess, in country life. How many such—bating the high birth, breeding, and education of the English women—can be counted among our *aristocratic* country residents? and all, the effect of a mistaken notion in education—artificial, unnatural, and most wretchedly misjudged. The thing is all wrong in both sexes, and so I fear it must remain, for reasons which I may give hereafter.

I will close this by an illustration: A young gentleman—he would dislike to be called less—the son of a wealthy man, who had furnished him with a five hundred acre farm, and was then erecting upon it a house to cost 25 or 30,000 dollars, and in the construction of which his builder could have cheated him five thousand, and he be none the wiser for it, at the suggestion of a friend, went to purchase of a neighboring resident a few choice, high-bred sheep, to put upon his lawn. Their value was ten to twenty dollars each; and yet this *gentleman*, who intended to furnish his house with costly furniture and statuary, for which unlimited orders, as to cost, were sent abroad, higgled at *three cents* a head in the price for the sheep, when the owner of them—and really beautiful animals they were—had already offered them for two-thirds of their worth! Great country, this—and "extensive people," some that live in it! Strain at the gnat, and so forth, and so forth!

Horticultural Criticism Criticised.—Three mortal pages of closely printed brevier type! Well, that will do. "The sargeant read me the chapter about Nimrod, the mighty hunter, the night before my christening, and a mighty *aisement* it was, to listen to any thing from the Book!" Thus discoursed BETTY FLANNEGAN HOLLISTER to NATTY BUMPPO, before the bar-room fire in Cooper's "Pioneers:" and I trust that Mr. LEUCHARS, having now taken his revenge, feels a little "aisement." If *he* is gratified, I am—certainly.

JEFFREYS.

July, 1850.

DESIGN FOR A RURAL SCHOOL-HOUSE.

IN a previous volume of this journal, we have endeavored to point out the many advantages that would result from an increased attention to the design and arrangement of country school-houses.

Barnard's School Architecture, a most useful and valuable work, adapted to the United States, which has already found a large circulation, is doing much towards enlightening the public mind on all points relating to this subject. Not a school district in America should be without this work; and we are glad to find that JAS. S. WADSWORTH, Esq., of Geneseo, so well known for his liberality and sagacity on all matters connected with popular education, has caused a large number of copies to be distributed in the various school districts of the state of New-York.

The district school-house, which ought to teach youth lessons of order and beauty, as well as the "fundamental branches" usually taught there, is perhaps the only public building in the country which exhibits utter neglect. In New-England, this reproach is fast passing away, and public school-houses, admirably designed, well arranged, warmed,

ventilated, and fitted up in an excellent manner, are to be found in the neighborhood of many of the larger towns. Boston is in the advance in this matter; and we hope it is a "notion," that will rapidly spread to other parts of the country.

The FRONTISPIECE for this number is a reduced copy from a design in a beautiful quarto volume, on schools and school-houses, by H. E. KENDALL, Esq., architect, lately published in London. It represents a small school-house, in a style admirably suited to harmonize with rural scenery. It is built of stone, at a cost of £270, but might with propriety, in this country, be built of wood for about half that amount. We offer it as a study for those interested in this subject.

The work in question contains fine designs, beautifully executed, and of much architectural merit. In most of them the house of the school-master or mistress adjoins, or forms part of the same building which contains the school,—an arrangement which not only increases the importance and good effect of the building, but adds very materially to the facility of preserving the school and all its surroundings in the best possible order.

ZINFINDAL GRAPE—THE CURL IN THE PEACH LEAF.

BY CHARLES ROBINSON, NEW-HAVEN.

DEAR SIR: I notice that in the Horticulturist for the present month, (p. 568,) you speak of the *Zinfindal* grape, as being endorsed by the late President and Secretary of our Horticultural Society, as "better for open culture than the Isabella."

If such were the case, it is passing strange that the fact should not not have transpired here. Surely, when inquiry has been for years constantly made here, as elsewhere, for a grape such as your readers have reason to believe that to be, it will require hard *knocking* to induce me to believe that our President has been all this time cultivating just such a fruit, and while we, his associates in horticulture and pomology, have met with him semi-monthly, for the purpose of testing the quality of fruits and for consultation and inquiry upon this precise general subject, that not a whisper should have been heard from him indicative of so high an estimation of that fruit. Not even a suggestion that it was at all comparable in its general properties for open culture to the variety so extensively disseminated among us.

That our Secretary, Mr. GABRIEL, did not thus misrepresent that fruit, I am assured from his own lips. In fact, he has never cultivated it except under glass, and there I think but one year. At the convention he did not speak of it at all, in reference to open to open culture. Probably Doct. MUNSON was also misunderstood by the reporter.

Unfortunately, cultivators are too often induced by overdrawn descriptions to incur large expense and much trouble and care in the purchase and rearing of articles, which, after the salesman has made his full profit, result only in disappointment. Such unfortunate misdirection of effort is too apt to induce an inveterate disgust for all suggestions out of the beaten track.

Too often, indeed, persons of a sanguine temperament are impressed with an idea that a certain article, or some particular remedy, or it may be some peculiar mode of culture, is

the "very best in the world." And forthwith a flaming article appears, describing, perchance, as a real occurrence, and as the result of actual experience, a successful experiment, which in truth had its existence only in the imagition of the writer.

All such off-hand suggestions and endorsements need cautious scrutiny, and the cultivator will do well to bring his own common sense to bear upon each particular case, and to determine for himself, by careful comparison and analogy, whether, after all, it is safe and expedient for him to enter upon the proposed speculation.

Last year, I could have endorsed, with the most confident belief. your remark in your work on Fruit Trees, p. 468, that the *curl* of the leaf on the peach tree was caused by a minute aphis. In truth, there is a peculiar curl which is caused in that manner; but the true curl or rather cockle of the leaf is a very different affair.

I have some fifteen peach trees, which, for three seasons have been regularly shortened in, and are now exceedingly thrifty and vigorous. I looked them all over this spring, for the express purpose, and could not find on any one of them a branch or even a twig injured in the least by the winter. They are indeed all I could wish, except the curl, which appears upon them all. They bloomed freely, and have set their fruit just in proportion to the absence of the curl.

So far as I observed last year, the aphis appeared on every leaf that was curled. They were, however, all destroyed with soap and suds. This spring, not an aphis could be found by the closest and most careful inspection, until long after the curl had manifested itself to the fullest extent, and then only on a few detached leaves, which indicated their presence by their peculiar and very different appearance. The cockle was perfectly evident upon the very first appearance of the leaves even as they burst from the bud, and could not have been induced by the action of any insect, except while in the bud itself, and before it opens.

From the most careful and thorough examination, I am satisfied that the injury is done while the leaf is folded in the bud, and that it is affected by an insect.

What that insect is, I have not been able to discover. Indeed, the idea did not occur to me until after the buds were expanded, nor am I sure of a remedy, or rather preventive, but I have a notion that next year (Deo volenti) my trees will be free from the difficulty.

Where the bodies of peach trees are occasionally covered with soap and potash so liberally that it runs down upon the ground around them, can the worm obtain access to the roots? I think not. Not one has appeared upon my trees for the last two years.

For the application to the bodies of trees, the black "whale oil soap" is the most effectual, doubtless because it is made with potash. Even that is benefitted for that purpose, by the addition of more potash, but for use upon roses and other tender shrubs, to destroy the white fly, aphides, slugs, and worms, that which is of a light color is preferable. Being finished with salt, it is less caustic, and the suds may be used much stronger. I have used it for years, so strong as to kill worms, upon all my plants, without the slightest injury to any of them, except the Harrison rose. That has a decided antipathy to any such application. That alone needs to be syringed with suds in the evening and water the next morning.

Permit me to say, that my suggestions in your April No. respecting the use of charcoal for purifying cisterns have since that time been extensively adopted in this city, and with uniform and the most gratifying success. The finer the charcoal, (in fact, the nearer it is to dust,) the better. It will of course need to

be repeated. Indeed it would be strange if so small a proportion as one pint to a hogshead would render water sweet for a very long time, particularly when impurities to a certain extent are continually flowing in.

CHARLES ROBINSON.

New Haven, June 20, 1850.

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We confess ourselves a little puzzled about the Zinfindal grape, and wan't to hear what Dr. MUNSON will say. Mr. PARSONS is reported in the Proceedings of the Fruit Growers' Convention as stating that this variety "succeeded perfectly well in the open air"—and Dr. M. as saying that there was "no difficulty with it out of doors." We were so much struck with these remarks at the time the discussion was going on, that we conjectured there must be some error about the variety—when one of these gentlemen—we cannot remember which—pointed out specimens then on the exhibition tables—which were certainly the true Zinfindal. ED.

PRACTICAL HINTS.

BY AN OLD DIGGER.

IF you are going to water a favorite plant, that is suffering by drouth, don't take the trouble to sprinkle three or four quarts of water upon the top of the ground, over the roots, every day. It is only "an aggrawation," as Mr. WELLER said, when he drank off a glass of very *small* beer. The thing to be done in such a case is, to take off the top soil nearly down to the roots—make a little trench or ditch to prevent the water running away, and then drench the roots with water. Put on as much as the ground will readily swallow. Then wait half an hour, till it is well settled, and put the loose soil back again. To make good thorough work of it, finish all by mulching the surface—that is, covering it with hay, grass, litter of spent tan, or whatever refuse of that sort you can lay your hands on. One or two such waterings will carry a doubtful subject through a six weeks' drouth, and will cost you a vast deal less, both of labor and water, than the daily sprinkling system, which is the common practice.

Almost every body, now-a-days, has a grape vine—either Isabella or Catawba; but not one half of us ever get a good crop of grapes. The difficulty, when the seasons are long enough, is pretty much all owing to the igno rance of pruning—for pruning is to a grape vine what a pond is to young ducks, something not to be done without. The two great mistakes, in pruning hardy grapes, is not cutting away enough wood in the winter-pruning, and cutting away too much in the summer-pruning. If you wish to have your vine thrive and well open to the sun, prune it as clean in February or March as you please. If you wish to stunt and diminish the size of your crop of grapes by one half, delay summer-pruning till they are as large as marrow-fat peas, and then make slashing work of it. Of course, in this way you will take off about a third of all the young leaves and give a check to the plant, like the jog on a rail-road made by throwing a locomotive off the track. But you have "let the sun in to the grapes," and the grapes will thank you for it, by growing about half as fast and two thirds as large, as they would have done if you had shortened the shoots ten days earlier and taken off about half as much. The grape leaf likes the hottest sun—but nature hangs the clusters of fruit under the shade of the foliage, and if you won't take the hint from her, she will set

you to thinking why your vines "turn out so poorly." If you find that your soil is poor, and if the crop does not set and swell-off properly, give them a good dose of soap-suds or liquid manure at the roots once a week. Grape vines are cormorants, and if you want large and fine fruit, you must give them no homœopathic doses of manure.

If I had "a call" to preach a sermon on gardening, I should take this for my text: *Stir the soil.* It's not an uncommon thing for people to admit the fact that nothing was made in vain; but nevertheless they will put in for an exception or two. "I should like to know what weeds were made for!" What for? Why, to force you to keep hoeing and digging in order to stir the soil and make it light and mellow. "But why?" Because the roots of plants must have *air*, and if the surface of the ground were never stirred—as for the most part it never would by lazy people, but for the weeds that must be cut up—it would become so hard and close, in many cases, that fresh supplies of air would never get to the roots. "But," the grumbler will say, "how do you get along with the fact that plants in a wild state, grow and flourish, though the soil is not stirred?" But the cases are, by no means, the same. Wild plants grow from year to year in the same spot, and there is a yearly deposit of leaves, stalks, and vegetable matter upon the surface of the ground, which keeps it light and open, so that the air can easily get to the roots. This is not at all the case in common soil, where the plants are scattered and the surface is bare, so that it "bakes and becomes hard" with the rain. On this account, the good gardener is always up and stirring his soil, and on this account all the little implements—ploughs, hoes, cultivators, and hand ploughs, are things not to be done without by the raiser of good crops. If you have any doubts remaining, try the experiment for yourself, the first spell of hot, dry weather. Take 50 hills of corn or a couple of beds of vegetables, and loosen up the soil about the roots very often—as often as it becomes a little hard. Directly along side, for the sake of fair play, leave as many hills or beds of the same crop, with little or no stirring. I won't waste room in saying what the result will be, but if it don't open your eyes to the importance of not putting your roots on a short allowance of air, then set me down for an unprofitable

OLD DIGGER.

PAVING TO PREVENT THE CURCULIO.

BY L. A. SPALDING, LOCKPORT, N. Y.

A. J. DOWNING, Esq.—Dear Sir: In page 62 of 4th vol. Horticulturist, is a communication made by me on the subject of paving as a prevention to the curculio, in which I alluded to the experience of LYMAN A. SPAULDING, Esq., of Lockport. That communication called out considerable discussion, pro and con, but the question appears as far from settlement as ever. In the last January number, page 315, your correspondent JEFFREYS wished me to obtain further information from Mr. SPALDING on the subject; and as I met him a few days since. he obligingly promised to write his whole practice, with the results touching this curculio question, which he has kindly done. I forward it to you for publication. I will further add, that Mr. SPALDING is an eminently practical man, and little given to

mere theorizing. I know of no more reliable authority than him. Yours, truly,

LEWIS F. ALLEN.

Black Rock, June 6, 1850.

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Dear Friend: The following statement will show she effect of paving under apricot and plum trees, which was the subject of our last conversation.

In the spring of 1834 I set out several rows of plum, peach, cherry, and apricot trees, twenty feet apart, and the trees ten feet apart in the row. My apricots are on plum stocks. Up to 1846, I had not a single fair crop of apricots from any of my trees. Some varieties of plums bore—the egg plum did not have but two fair crops in that time. At any rate, I was discouraged in trying to raise apricots and plums.

On a lot on Main-street in this village, where I resided from 1823 to 1835, I had an apricot tree, near the garden fence, outside of which was the side-walk of the street, and inside was a brick walk leading to the rear of the garden. This tree bore uniformly fine crops to maturity, until it was destroyed about four years ago. I was puzzled to account for the fact, that my trees at my present residence should not bear to maturity, with all my pains of thumping and destroying the curculio, picking up and feeding the fallen fruit to the hogs—while the tree on my old place hung full. In 1846 I saw a statement that to pave under apricots, plums, and nectarines, would prevent the ravages of the curculio. This gave me a clue at once to the wherefore of the bearing of my apricot on my old place—and I resolved to at once pave under my trees. In the spring of 1846 I spread leeched ashes under my apricots and plums, and paved all my apricots and part of my plums. Those paved bore abundant and fine crops to maturity, in 1846, '47, '48 and '49, while the egg plums, which were not paved under till the spring of 1849, for fourteen years had but two good crops. In 1849 I paved under them, (the egg plums,) and they bore a fine crop. They are in one of the rows, and I know of no reason why they should not bear, but because they were not paved. They were bearing trees when set in 1834, and have ever been thrifty—the fruit uniformly falling off before maturity, excepting as stated.

I have a fine nectarine which always hangs full of green fruit, and it never yet produced a ripe nectarine—this was set out in 1835 in a row of peaches, and is not paved. I have this spring spread a coat of leeched ashes under it and paved it. It hangs very full, and I have no doubt I shall have a fine crop of ripe nectarines.

I usually sweep up the fallen fruit and feed to the hogs—about one-third of my apricots are stung and drop, but more remain on the tree than I usually allow to ripen. Every year since I paved, my apricots are loaded with ripe fruit. I sprinkle salt freely on the pavement to destroy the grass and weeds which spring up between the edges of the flat stones I used, and to fertilize the ground.

Persons may theorize as much as they please—but I have the fullest confidence, that paving must produce the same results every where. I have neighbors who attempt to raise plums and apricots without paving, and complain of losing their fruit; and fruit falling from my trees show, that the curculio exists here in great abundance. It is not the absence of the insect that saves my fruit, but in my opinion *its instinct*, which leads it away from paved trees, because the chance of reproduction is destroyed and its *labor of love lost*. Its darling *maggot* cannot burrow in the ground under the the paved trees. Be it instinct, or desire to perpetuate the race, or what it may, I know that since I paved, I have fine apricots and a great abundance of them—at a season, too, when such fruit is a great luxury. The sur-

plus commands a large price in our market, and *pays* better than any other fruit. The expense of paving is more than liquidated the first year. Hard brick, flat stones, or even cobble stones would do the job. Salt destroys the weeds and grass. Leached wood ashes, two or three inches thick, on which to lay the paving, is important, as being a substance in which no maggot would burrow, in dodging the stone or brick.

A friend recently informed me that he cut down his nectarine trees, because the fruit uniformly fell off. Many have given up trying to raise the apricot for the same reason, and the plum, too, is growing into disfavor from the same cause. If this certain remedy were known and applied, what a vast addition to the comfort and pockets of our people would result! Very respectfully,

L. A. SPALDING.

Lockport, N. Y., 6th mo. 1st, 1850.

I would mention that my pavements are nine to ten feet wide, and run lengthwise of the row. L. A. S.

EVIDENCE ON THE PEACH AND NECTARINE MYSTERY.

BY J. BINGHAM, HUDSON, N. Y.

WONDERS will never cease, until ignorance is lost in knowledge, and knowledge lost, if it can be, in intuition.

In 1841, Mr. CHARLES TOMPKINS, of this city, planted in the yard back of his ware-room in Warren-street, a peach stone, from which has grown a tree twenty feet high. It has produced fruit regularly every season since it began to bear, of the large delicious free-stone kind.

Some three years ago, "come peach time," Mr. T. gave a peach of this tree, weighing 14 ounces, to his friend and neighbor, Mr. BUCHANAN, a Scotchman. And the latter, Scotchman-like, gave it to Mr. DUNCAN HOOD, a countryman of his, occupying some nursery grounds in the vicinity. Mr. HOOD, gave it to his children to eat, taking care to preserve the stone for planting. This stone he opened, and found it a double one, containing two kernels. He closed the stone and planted it near his own dwelling. Here he lives, "the monarch of all he surveys," within his enclosure of four acres—an illustration of what a single-handed man can do, exercising talent with industry and frugality rarely equalled, seldom surpassed.

And now the interest of the tale commences.

Yesterday, I saw the product of that one stone, in two trees, near ten feet high, twin-like, standing side by side, but each bearing different fruit from its companion, friend, neighbor and relative—one bearing *Nectarines* and the other *Peaches!*

Mr. BUCHANAN first made the discovery, I believe, the same day; for I found him there; having drawn Mr. HOOD'S attention to the mystery, which yet remains unsolved. We are in a quandary. Can you enlighten us?

J. BINGHAM.

Hudson, N. Y., 16th June, 1850.

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We are obliged to our correspondent for giving another evidence of the identity of species between the peach and the nectarine. He has not, probably, seen the discussion on this subject published in our first volume. The nectarine is considered, by botanists, only a *variety* of the peach, and not a distinct *species*—hence, though nectarine stones usually

produce nectarine trees, and peaches, peach trees—yet it occasionally happens that nectarine seedlings return back to the original form, the peach—and on the other hand, as in this case, the peach sports by seed with the nectarine variety. The French call all nectarines "smooth peaches"—*piches lisses*. There are cases on record, in the Transactions of the Horticultural Society of London, of both peaches and nectarines growing naturally on the different branches of the same tree.

Our friend Mr. LONGWORTH of Cincinnati, who flatly denies the possibility of such a thing as a peach stone producing a nectarine tree, is, we think, bound to pay a visit to the "twins" at Hudson.

AN ESSAY ON FLOWERS.

BY H. T. TUCKERMAN, NEW-YORK.

[WITH Mr. TUCKERMAN'S obliging permission, we copy from his last volume,—"The Optimist,"—the following charming Essay on Flowers. Mr. TUCKERMAN'S refined and cultivated taste in the arts and his love of nature are admirably displayed in it, and we have rarely met with any thing on the subject at once so full of poetical *fragrance* and scholarly culture. ED.]

Floral apostles! that in dewy splendor
Weep without woe, and blush without a crime,
O may I deeply learn and ne'er surrender
Your lore sublime. HORACE SMITH.

I attended church on a fine day of midsummer, in one of the most beautiful villages of New England. The structure, though externally attractive, from its retired situation and the pleasant grove that surrounded it, like most places of worship in the country, had a very bare and unhallowed aspect within. The formal divisions of the pews, the superfluity of white paint, and the absence of anything venerable, either in form or hue, made it agreeable to turn the eyes from the thinly scattered congregation and faded pulpit drapery, to the open window, against which a noble linden lightly tossed its sprays, and through which stole in a delicious breeze, that made the leaves of the hymn-books flutter, a response to that sylvan whispering, which had in it more of devotional music than the screeching bass-viol and unchastened voices that soon drowned all other sounds. In reverting to the scene more immediately adjacent, however, I suddenly beheld a vase of flowers on the communion-table. They were most inartificially and tastefully arranged; the brilliant tints judiciously blended, the shadowy green naturally disposed, and the base of the jar which contained them wreathed with trailing blossoms. The sight of this vase of flowers was like enchantment. It seemed to fill that forlorn church with its presence. It spoke of nature, of beauty, of truth, more eloquently than the service. It atoned for the meagre altar, the homely edifice, and the ungarnished pew. It seemed to embody and typify the externals of worship with sacramental chalice, baptismal cup, and odorous censer.

Science and sentiment have rather formalized than illustrated the association of flowers: the one by its rigid nomenclature, and the other by an arbitrary language, profane the ideal charms of the floral kingdom. It is pleasant to regard these graceful denizens of the garden and forest, in the spirit of that fine hymn of Horace Smith's which celebrates their beautiful significance. Instead of looking at them through the microscopic lens of mere curiosity, or according to the fanciful and hackneyed alphabet that Floral dictionaries suggest, let us note their influence as symbols and memorials. To analyse the charm of flowers, is like dissecting music; it is one of those things which it is far better to enjoy than to attempt to understand. In observing the relation of flowers to life and character, I have often been tempted to believe that a subtle and occult magnetism pervaded their atmosphere; that inscriptions of

wisdom covered their leaves; and that each petal, stem, and leaf, was the divining rod or scroll that held an invisible truth.

Viewed abstractly, one of the peculiar attractions of flowers is the fact that they seem a gratuitous development of beauty; "they toil not, neither do they spin." In almost every other instance in nature, the beautiful is only incidental to the useful; but flowers have the objectless, spontaneous luxury of existence that belongs to childhood. They typify most eloquently the benign intent of the universe; and by gratifying, through the senses, the instinct of beauty, vindicate the poetry of life with a divine sanction. Their fragility is another secret charm. A vague feeling that the bright hue is soon to wither and the rich odor to exhale, awakens in the mind, unconsciously, that interest which alone attaches to the idea of decay. These two ideas—that of the gratuitous offering of nature in the advent of flowers, the benison their presence seems to convey, and the thought of their brief duration—invest flowers with a moral significance that renders their beauty more touching, and, as it were, nearer to humanity, than any other species of material loveliness. The infinite variety of form, the exquisite combination of tints, the diversity of habits, and odorous luxuries they boast, it would require an elaborate treatise to unfold. We may obtain an idea of the perfection and individuality of their forms by considering their suggestiveness. Scarcely a tasteful fabric meets the eye, from the rich brocade of a past age to the gay prints of today, that owes not its pleasing design to some flower. Not an ancient urn or modern cup of porcelain or silver, but illustrates in its shape, and the embossed or painted sides, how truly beautiful is art when it follows strictly these eternal models of grace and adaptation. Even architecture, as Ruskin justly indicates, is chiefly indebted to the same source, not only in the minute decorations of a frieze, but in the acanthus that terminates a column, and the leaf-like pointing of an arch. A skilful horticulturist will exhibit the most delicate shades of fragrance in different species of the rose, until a novice cannot but realise to what a miraculous extent the most refined enjoyment in nature may be sublimated and modified; and the same thing is practicable as regards both hue and form.

The spirit of beauty, in no other inanimate embodiment, comes so near the heart. Flowers are related to all the offices and relations of human life. They bound the sacrificial victim of the ancients; and, from the earliest times, have been woven into garlands for the victor, trembled in the hair of the bride and cheered the invalid's solitude. They have been ever offered at the shrine of beauty, and claimed as the pledges of love, nor ceased to adorn the banquet or be scattered over the grave. Thus domesticated, even without intrinsic beauty, and exclusive of any appeal to taste, flowers are blended in the memories of the least poetical with scenes of unwonted delight, keen emotion, and profound sorrow. Hence they have a language for each, not recognised in any alphabet, and their incense is allied with the issues of destiny. McGregor's foot was more firmly planted, because upon upon his "native heather;" the Syrian, in the Jardin des Plants, wept as he clasped his country's palm-tree; Keats said, in his last illness, that he felt the daisies growing over him; and one who, even in renowned maturity, had wandered little from the singleness of childhood, declared he could never see a marigold without his mouth's watering at the idea of those swimming in the broth Simple Susan prepared for her mother, in Miss Edgeworth's little story. There is no end to the caressing allusions of Petrarch to the violet and the laurel, so identified with the dress and name of his beloved. Indeed, we might scan biography and the poets for years, and continually find new evidences of the familiar and endearing relation of flowers to sentiment. Each of the latter have celebrated some favorite of the race in their choicest numbers; and the very names of Ophelia and Perdita are fragrant with the flowers that Shakspeare, with the rarest and most apposite grace, has entwined with their history.

The Venetian painters must have studied colour in the hues of flowers; for the brilliant, distinct, and warm tone of their works affects the spectator exactly as these rainbow gems; especially when they strike the eye in an isolated position, or surrounded by dim umbrage. Nor is this effect confined to the domesticated flowers; for the richest and most delicate gradations of tint occur among uncultivated and indigenous plants—such as the lobelia of the swamp, the saffron of the

meadow, and the nameless variety of prairie blossoms. There are few more curious subjects of speculation than the *modus operandi* by which such an infinite diversity of colours are obtained from the same apparent source. This is an exquisite secret of nature's laboratory. The physiology of plants has been successfully investigated; and it is interesting to consider that the vitality of flowers is much the same as our own as regards its process, though so different in kind. They have affinities of sensibility; they germinate and fructify; but the elements they assimilate are more subtle than those which sustain animal organization; yet sun, earth, and air nourish them according to a nutritive principle not unlike that by which our frames are sustained. The reciprocal action between vegetable and organic life, and their respective absorption and diffusion of gases, is one of the most beautiful expositions of science. But the instinct of flowers is not less curious; some fold their leaves at the approach of a storm, and others open and shut at particular hours, so that botanists have rejoiced in floral dials and barometers. Their relation to sight and smell is very obvious; but that to touch is less regarded, and yet it is extraordinary how the feel of almost every known fabric can be realized by the contact of leaves. Where the touch is sensitive, experiments of this kind may be tried, much to the amusement of the sportive; for many leaves, if unperceived, and at the same time subject to an exquisite touch, give the sensation of animal, insect, and even mineral substances, indicating how intricately modified are the proportions of fibre, down, juice, and enamel in their composition.

In their associations, however, flowers are quite independent, both of rare qualities and peculiar beauty. Almost all great men have loved rural seclusion, and have had their favorite villa, island, arbor, or garden-walk. In Switzerland, Germany, and, indeed, everywhere on the continent, these places, consecrated by the partiality or endeared by the memory of genius, are shrines for the traveller. Such are Clarens, Vaucluse, and Coppe. Lamartine's tenderness for Milly, his childhood's home, as exhibited in his late writings, illustrates a sentiment common to all imaginative and affectionate men; but it is observable that sometimes these charmed spots boast no remarkable floral attractions, often only sufficient to make them rural; a grove of pines, a small vineyard, a picturesque view, and not infrequently a single tree—like the famous old elm at Northampton, amid whose gigantic branches Dr. Edwards, who wrote the celebrated treatise on the Will, was accustomed to sit and meditate;—any truly natural object redolent of verdure and shade, is enough. And the hedges of England, the moors of Scotland, the terrace-gardens of Italy, the scrambling, prickly-pear fences of Sicily, and the orchards of America, are attractive to the natives of each country, on the same principle. It is the beautiful distinction of flowers that, gathered into magnificent horticultural shows or hidden in lonely nooks, they alike address the sense of beauty, so that a little sprig of forget-me-nots may excite a world of sentiment, and one scarlet geranium irradiate an entire dwelling.

Flowers not only have their phenomena, but their legends. The latter are usually based upon some idea of a sympathetic character, as that which transforms Daphne into a laurel, and changes the pale hue of a flower to crimson or purple at the occurrence of human shame or misfortune. Even veneration is excited by the mysterious natural history of some flowers, or the idea they symbolize. Thus the aloe, that blossoms once in a century, and the night-blooming Cereus, which keeps vigil when all other flowers sleep; and the Passion-flower, in which the Catholics behold the tokens of our Saviour's agony, have a kind of solemn attraction for the eye and fancy.

There is no little revelation of character in floral preferences. It accords with the humanity of Burns that he should celebrate the familiar daisy; with the delicate organization of Shelley that a sensitive plant should win his muse; and with Bryant's genuine observation of nature that he dedicates a little poem to an inelegant and neglected gentian. It is in harmony with the English idiosyncrasy and church attachments of Southey, that his most charming minor poem is in praise of the holly, the symbol of a Christian and national festival; and no poet but Crabbe would descend to so homely a vegetable product as kelp. There is no flower more peculiar in its beauty and growth than the waterlily; accordingly, Coleridge, with his meta-

physical tendency to seize on rare and impressive analogies, has drawn a comparison from this flower which strikes me as one of the most poetical as well as felicitous in modern literature. Speakin of the zest for new truth felt by those already well instructed, as compared with the indifferent mental appetite of the ignorant, he says, "The water-lily, in the midst of waters, opens its leaves and expands its petals at the first pattering of the shower, and rejoices in the rain-drops with a quicker sympathy than the parched shrub in the sandy desert." The dreamy, half sensuous, and half ideal nature of Tennyson, is naturally attracted by the sweet ravishment innate in the breath and juices of some flowers. He is fitted keenly to appreciate the luxurious indolence and fanciful ecstasy thus induced; and, therefore, one of the most effective and original of his poems is "The Lotus Eaters." Moore's famous image of the sunflower is a constant bone of contention between horticulturists and poets; the former asserting that it does not turn round with the luminary it is supposed to adore, but is as fixed on its stalk as any other flower; and the latter declaring that the metaphor "*se non é vero, é ben trovato.*"

Few plants are more graceful or versatile in contour than the fern. One can scarcely pass a group without recalling that line of Scott, which so aptly describes the utter lull of the air:

"There is no breeze upon the fern, no ripple on the lake."

And what figure of rhetoric better suggests the caprice of woman than that which has almost become proverbial since it was incorporated in his spirited verse:

"—— variable as the shade
By the light, quivering aspen made!"

Goldsmith's sympathy with the rural and human is associated intimately with the hawthorn, "for whispering lovers made." Rosemary has been more emblematic of remembrance, since it was so offered by the "fair Ophelia;" and Heart's-ease is consecrated by the splendid compliment to "the virgin throned by the West," to which it is indebted for the name of "love-in-idleness." The epicurean utilitarianism of Leigh Hunt recognised "comfort" in the feel of a geranium leaf; and who that has read with appreciation Miss Barrett's fine poem, elaborating the beautiful sentiment of the Bible, "He giveth his beloved sleep," can see a poppy, that gorgeous emblem of the drowsy god, without a benison on the thoughtful lyrist? I think that the yellow broom must have originally flourished in lonely places. For hours, I followed a mule-path in the most deserted part of Sicily, cheerful with its blossoms, whose rich yet delicate odor embalmed the air; hence the significance of Shakspeare's allusion to this flower, "which the dismissed bachelor loves, being lass-lorn." Campbell must have had an oppressive sense of the poisonous horror of night-shade, from his reference to it, in the protest against scepticism, as the natural companion of dismay. I have always thought the thistle an apposite symbol, not only of Scotland, but of her martyred queen—"its fragrant down set round with thorns, and rifled by the bee."

One of the most popular tales of the day—"Picciola"—is based upon the interest which a single flower may excite when it is the sole companion of a prisoner; and the favor this little romance has enjoyed, proves how natural is the sentiment it unfolds. The most severely religious minds, however indifferent to art or scenery, are not infrequently alive to this feeling; the constant allusion to flowers, in a metaphorical way, in the Scriptures; the rich poetical meaning attached to them in the East; the lily that always appears in pictures of the Annunciation; the palm-leaves strewed in our Saviour's path; the crown of thorns woven for his brow, and his declaration of the field lilies, "that Solomon in all his glory was not arrayed like one of them"—indicating that his pure eyes had momentarily rested on their familiar beauty—lend to such persons a hallowed sense of their attractiveness. There is yet another reason for this exception to a prosaic view of what is merely charming in itself, which those disposed to bigotry make in favor of flowers. It is that they symbolize immortality. No common figure of speech is more impressive to the peasant than that which bids him see a "type of resurrection and second birth," in the germination of the seed, its growth, development, and blossoming. Again, too, there are the associations of childhood, whose first and most innocent acquisitions were gathered flowers, emblems of its own exuberance, offerings of its primitive love. I imagine the sense of colour—now regarded as a separate

and very unequally distributed faculty—is one of the earliest developed; it explains the intense gratification even of an infant at the sight of a tulip; and there is reason to believe that the hues of flowers are the most vivid tokens of enjoyment that greet the dawning mind.

The orientals, adepts in voluptuous ease, place vases of flowers around their fountains; and, as they lie upon divans, their eyes close, in the refreshing siesta, with these radiant sentinels for the last image to blend with their dreams, and their odor to mingle with the misty spray and cheer their waking. The Greek maidens dropped flowers from their windows on those that passed, to indicate their scorn, praise, or love. One of the poetic touches which redeem the frugal lot of the grisettes, is the habit they indulge of keeping a box of mignonette on their window-sills. You may see them at dawn bending over it, to sprinkle the roots or enjoy the perfume. In Tuscany and the Neapolitan territory, peasants wear gay flowers in their hats; while the more grave people of the intervening country rarely so adorn themselves. I was struck, at the wedding of an American in France, to see the servants, tearful at parting with their mistress, decorating the interior of her carriage with white flowers. There is something, however, very artificial in the dry *immortels*, here and there dyed black, for sale at the gates of Pere la Chaise, and bought by the humbler class of mourners to hang on the crosses that mark the graves of kindred. Our own rural cemeteries are teaching a better lesson. The culture of flowers on such domains, is not only in excellent taste, but, when judiciously selected and arranged, a grateful memorial. At Monaco, a town in Italy, a few years since, the body of a young child was covered with flowers, according to the custom of the place; and when sought for the purpose of interment, it was found sitting up and playing with the flowers—an affecting and beautiful evidence of the ignorance of death characteristic of that spotless age.

Fashion seldom interferes with nature without diminishing her grace and efficiency. It denudes the masculine face of the beard, its distinctive feature; substitutes for the harmonious movement of the chaste and blithesome dance, the angular caprices of the polka; clips and squares the picturesque in landscape into formalized proportions; and condemns half the world to an unattractive and inconvenient costume. Even flowers seem profaned by its touch; there is something morbid in their breath when exhaled profusely in gorgeous saloons and ostentatiously displayed at a heartless banquet; and wisely as the florist may adjust them into bouquets, they are so firmly entwined and intricately massed together, as often to resemble mosaic. We turn often from the most costly specimen of this appanage of the ball and opera, with a feeling of relief to the single white rosebud on a maiden's breast, or the light jasmin wreath on her brow. The quantity and showy combination of the flowers, especially the heated atmosphere and commonplace gabble of the scene, and often the want of correspondence between the person who so consciously holds the bouquet in her gloved hand and the sweet nature it represents, rob the flowers of their legitimate claim. Indeed, like all truly beautiful things, they demand the appropriate as a sphere. The east wind, in Boston, on the last national holiday, and the grave faces of the children, to say nothing of the idea that approbativeness and acquisitiveness were the organs mainly called in play in their little overworked brains, utterly dispelled all genuine romance and grateful illusion frem the floral procession. Something analogous in character, atmosphere, and occasion, is needed to render the ministry of flowers affecting and complete.

We instinctively identify our acquaintances with flowers. The meek and dependent are as lilies of the valley, and, like them, need the broad and verdant shield of affectionate nurture; sycophants are parasites; exuberant and glowing beauty and feeling are more like the damask rose than anything in nature; the irritable annoy us like nettles; the proud emulate the crown imperial; the graceful are lithe as vine-sprays; the loving wind around our hearts like tendrils; and the cheerful brighten the dim background of life like the scarlet blossoms of the woodbine. Not a flower in the cornucopia of the floral goddess but hath its similitude and its votary. The boy's first miracle is to press the seed-vessels of the balsamine till it snaps at his touch; or shouts, as he runs from bed to the garden, at the sight of the rich chalice of the

morning-glory, planted by his own little hand, that has opened while he slept. The clover's pink globe, and the deep crimson bloom of the sumac; the exquisite scent of the locust, and the auspicious blooming of the lilac; the hood-like purple of the fox-glove, and the dainty tint of the sweet pea, stir, whenever they re-appear, those dormant memories of early and unalloyed consciousness, which

> "—— neither man nor boy,
> Nor all that is at enmity with joy,
> Can utterly abolish or destroy."

Thus, from the first, perverted mortal, thou wert indebted to flowers;—as a wayward urchin, loitering on the way to school, thou whistled shrilly against the edge of a grass-blade, held a butter-cup to the chin of thy little comrade, or puffed away the feathery seed-blossom of the dandelion to ascertain if thy secret wish would be consummated; as a youth, with quivering pulses and flushed brow, thou wert not ashamed to seek the choicest flowers as interpreters of thy feelings towards one before whom thy words were tremulous, yet fond; and in thy prime, when positive knowledge and accurate deduction constituted thy felicity, it was, or might have been, to thee a rational pastime to study the botanical relations, laws, and habits of these poetic effusions of the earth; causing them to gratify thee through analysis, as they once did through sentiment. And "in that Indian summer of the soul," that descends on frosty age, how do flowers serve as the magic connecting bond that unites senility and childhood! The eye of age softens as it beholds the shower of blossoms from the fruit-trees, thinks of its own flowery day, and is thankful for a serene maturity. Thus have flowers an utterance everywhere and always; the wild columbine, on its thread-like stem, that hangs on the stony cliff; the fungus, that swells from the mouldering trunk of gigantic forest trees; the tropical exotics of the *stuffo*, that almost bewilder in their strange beauty; and the buds that open beneath Alpine snows, address our sense of adventure, of wonder, and of gentleness, in quiet, yet persuasive appeals, that sometimes we cannot choose but heed.

The fondness of the Dutch for tulips, it may be conjectured, is partly owing to the flatness of their country, as well as its alluvial soil; the absence of picturesque variety in form inducing a craving for the most vivid sensations from colour. Perhaps the compactness and neat growth of bulbous roots, so adapted to their cleanly and well-arranged domicils, somewhat accounts for the exquisite degree of cultivation to which they bring this species of flowers. It is one characteristic advantage of such natural ornaments, that a few well selected, or even one in a room, or in the midst of a grass-plat, will diffuse refreshment and excite imagination. Thus the flowers that cluster on the roofs of Genoa, and the little knot of violets imbedded in geranium leaves dispensed by the flower-girls in Tuscany, are more pleasing than if the display were greater. On revisiting a city of the latter state, after years of absence, as I followed the lagging porter who carried my luggage, in the twilight of early morning, I was startled by a cordial exclamation, "*Ben tornato, O ben tornato signore!*" and looking down a narrow street, I saw the flower-girl from whom I had so long ago been accustomed to purchase, gaily advancing with a bouquet. It was a welcome such as awaits the traveller in few countries, and one which touched the heart with cheerful augury.

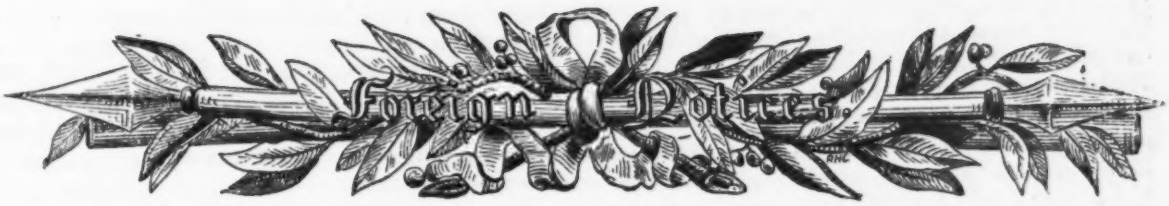
There is, indeed, something in flowers redolent of hope and suggestive of amity. Their very universality renders them eloquent of greeting. The fair, maternal bosom of Titian's Flora has a significance beyond that which artists recognise; it proclaims Nature as a beneficent parent, lavishly dispensing the flowers that strew life's rugged path, with sweet monitions and grateful refreshment. How, in the season of vivid emotion, has the unexpected sight of a pale crocus bursting from the mould in early spring, the teeming odor of a magnolia tossed on a summer breeze, or the green flakes of a larch, powdered with snowy crystal in the winter sun, kindled the very frame with a kind of mysterious delight! There is to the poetical sense, a ravishing prophecy and winsome intimation in flowers, that now and then, from the influence of mood or circumstance, re-asserts itself like the reminiscence of childhood or the spell of love. Then we realize that they are the survivors of our lost paradise, the types of what is spontaneous, inspiring, and unprofaned in life and humanity, the harbingers of a blissful futurity. It was, therefore, in a rational as well as a fanciful spirit, that trees were con-

secrated into emblems and auguries; that the willow, in its meek flexibility, was made the insignia of desertion; the cypress, in its solemn and dense foliage, of death; the enduring amaranth, of immortality; and the classic shaped, and bright green leaves of the laurel, of fame.—Not only in their native traits, but in their almost sympathetic habits, flowers come near our affections. How patiently the ivy binds the disjointed stones of a ruined edifice, and the moss creeps over the grey and time-stained roots and rocks, as if to cover their decay, and relieve their sterility! With what a wreathing protection clusters the woodbine round the humble porch! The field flowers, some one has truly said, smile up to us as children to the face of a father; and the seeds of those destined for birds, fly on innumerable wings of down, to germinate the more abundantly. The warm hues of the dahlia would be oppressive in any other season than autumn; and the glitter of the ocean's strand is chastened by the gay weeds, whose variegated tints are freshened by every wave that dies along the beach. Even this herbal, the repository of memorials gleaned from hallowed scenes, or treasured as the fragile trophies of joys as fragile, "strikes the electric chain" of imagination and memory with a deeper vibration than a sketch-book or a diary. That little cluster of thin, pale green leaves, with a shade of delicate brown at the edges (called by the Italians the Hair of Venus,) which clings to the page as if painted on its surface, once hung from the dark, rocky wall of the remarkable cavern in Syracuse, called the Ear of Dionysius; and as I look upon it, the deserted bay, crumbling tombs, and wreck-strewn *campagna* of that ancient site are vividly before me; even the flavor of the Hybla honey, and the echo of the mule's tramp, return to my senses. This weed, so common in shape and hue that it needs a reminiscence to justify its preservation, was plucked as I stood tip-toe on the edge of a gondola, and held fast to old Antonio's shoulder, while he checked his oar beneath the Bridge of Sighs, and I snatched it from the interstices of the arch. The piazza of San Marco, the Adriatic glowing with the flush of sunset, the lonely canals, and all the grey quietude of Venice, are conjured by the withered memento, "as at the touch of an enchanter's wand." More costly acquisitions have yielded less zest in the winning than this slender yellow flower, which, evading the jealous watchfulness of the guard at Pompeii, I gathered to assure myself thenceforth that I had actually walked the streets of the buried city. How venerable seems this bunch of grass and flowers that drew its sustenance from the loamy walls of the Coliseum; and with how marvellous a freshness do I call up the medieval architecture, exquisite *campanile*, and mountain boundaries of Florence, beholding again the anemone purloined, on a fine Sabbath morning, in the gardens of the Boboli! I cannot see this cassia blossom without feeling a certain impulsion to monastic life, as I think of the kind friars, the noble organ, lava-heaped confines and soothing retirement of the Benedictine convent, at Catania, whence I bore it as the memento of one of those white days in the traveller's experience, that atone for a thousand discomforts. Pleasant was the summer evening, at Messina, when, in one of the palaces that line the *marina*, we kept gay vigil in order to witness the blooming of this faded Cereus; and high beat the pulses of an entranced multitude on the night this faded nosegay was pressed to the lips of Amina, in that last *scena*, when her voice quivered with uncontrollable feeling, and carolled the "*Ah! non giunge*" in tones of such pathetic delight as brought a tear to the sternest eye. I will not throw away this rusty-looking japonica, but keep it as a talisman to guard me from the fascination of heartless beauty, reflecting on the character of the brilliant ——, in whose dark hair it rested during the last ball of her triumphant season, that bewitching face displaying every phase of expression, while not one look was inspired by a soul, any more than this flower, in its graceful prime, was imbued with fragrance. Far different is the association that endears the scarlet honeysuckle and white holyhock beside it. Through peaceful hours that overflowed with unuttered tenderness, and an ecstatic sense of geniality and recognition, I watched beside one I loved; the hummingbird and the bee sipping the nectar from their chalices, and compared the luxurious pastime with my own. Nor will I cease to treasure this orange-blossom given me by the dark-eyed Palermitan, in the grove of her father's domain, when the air was filled with the odor

of the sweet south, and musical with the far-off chime of the vesper-bells. The scent of this grape blossom is associated with the hospitality of a villa below Fiesole; and that heliotrope makes me think of a fair invalid with whom I wandered among the ilexes of a palace-garden, in whose grassy walks the vanilla flower grew profusely. I saved the reedy leaf that is stitched to the opposite page, as one of the countless proofs of the thoughtful care of my motherly hostess at ——. She stuck it in my window on Palm Sunday. When gleaned in a field near Lucca, this little flax-blossom held a dew-drop, and looked like the tearful blue eye of a child. Arid as it is, the pink, star-like flower beneath whispers of romance. At a pic-nic, a friend of mine who has an extreme impatience of tenter-hooks, determined to have his position with a certain fair one defined, as, after some encouragement, she seemed half inclined for another. With true feminine tact she avoided an interview, though they constantly met. I believe she either could not decide between the two, or hated to give up my friend. He laughingly proposed, while we were resting in a meadow, to make his favorite a sybil, and handed her a knot of these starry flowers, to pluck the leaves one by one, and reveal the hearts of the company, according to a familiar game. When the time came to apply the test to her own sentiments, she was visibly embarrassed. He fixed his calm eyes upon her face, and I, knowing at once his delicacy and his superstition, felt that this was a crisis. The lovely creature's voice trembled, when, half petulantly, and with visible disappointment, she plucked away the last leaf, which proved her only his well-wisher. The omen was accepted, and my friend soon had

"—— a rougher task in hand
Than to drive liking to the name of love."

Flowers are the most unobjectionable and welcome of gifts. There is a delicacy in selecting an offering, whether of gratitude, kindness, or affection, that sometimes puzzles a considerate mind; but where any such hesitancy occurs, we can turn to flowers with complacency. Nature furnishes them, and all her beautiful products may bravely challenge fastidiousness. No human being not utterly perverted, can scorn flowers: nor can they be offered, even to the spoiled child of fortune, without an implied compliment to taste. The fairest of Eve's daughters, and the proudest scion of nobility, as well as the village beauty, the most gifted and least cultivated—provided either imagination or heart exists—must feel gratified at such a tribute, whether from dependent or equal, new acquaintance or faithful lover. Like all spontaneous attractions, that of flowers gives them immunity from ordinary rules. They are so lovely and so frail, that, like children, they bespeak indulgence ere they offend. Of all material things, they excite the most chivalric sentiment; and hence, are given and received, scattered and woven, cultivated and gathered, worn and won, with a more generous and refined spirit than any other ornaments. They are radiant hieroglyphics sculptured on the earth's bosom; perhaps the legacy of angels, but certainly overflowing with messages of love that are apart from the work-day scenes and prosaic atmosphere of common life, and allied to better moments; to the sweet episodes of existence, to the promises of love, and the memories of youth: and hence they are consecrated, and like "the quality of mercy," bless "him that gives and her that takes."



THE STANWICK NECTARINE.—An extraordinary sale took place in London, on the 15th of May last, of the first plants of a new nectarine bearing this name, and which having received the praise of the severest judges, and the highest authorities in England, cannot we think but be the finest fruit of its class yet known.

The following account of this fruit from the pen of Dr. LINDLEY, appeared in the Gardeners' Chronicle.

The original nectarine tree of this variety is in the possession of the DUKE OF NORTHUMBERLAND, at whose seat at Stanwick, it has borne fruit for several years, and from which it derives its name. The Duke received it from the late Mr. BARKER, of Sucedia, in Syria, a gentleman whose attention had long been turned to the cultivation of the finest fruits of the East, in the hope that they might be valuable in his native country. It was his anxious desire, that such as proved to be adapted to the climate of the United Kingdom, might be immediately disseminated; and the sale now announced is in furtherance of his benevolent design. In surrendering his property in it to the public, the DUKE OF NORTHUMBERLAND has resolved that the proceeds, after paying the expenses of propagation, etc., should be tranferred to a friend in aid of the Benevolent Institution for the Relief of Infirm Gardeners. The sale will take place on the anniversary of the Institution, and the purchasers will have the satisfaction of knowing that in this instance they may contribute materially to its funds, while at the same time they are consulting their personal interests.

In excellence, the Stanwick Nectarine is as far beyond all other nectarines as a Green gage plum is beyond all other plums. Beyond this, praise cannot reach. It may, nevertheless, be as well to repeat, on the present occasion, what we stated some time since, when the high quality of the nectarine fruit became perfectly ascertained.

The Stanwick Nectarine is about the size of an Elruge, and like it in shape, except in being less heart-shaped at the base. Its skin is pale, like that of the white nectarine, when shaded, with a violet tinge next the sun. The flesh is white, exceedingly tender, juicy, rich and sugary, without the slightest trace of the flavor of prussic acid. The stone is middle-sized, ovate, with rather a prominent sharp edge, very rugged, and of a chocolate colour. The kernel is sweet, like a nut, possessing none of the bitter almond flavor.

Dr. LINDLEY adds that at the time the foregoing was written, the "full value of the fruit was imperfectly understood, the fruit which reached London having been damaged in the carriage. We have lately, however, been favored by his grace the DUKE OF NORTHUMBERLAND, with a liberal supply, which arrived in the most perfect condition, and we can now appeal to various persons near London, who had the opportunity of tasting it, as witnesses of its unrivalled excellence. 'The most delicious nectarine I ever ate.' 'The flavor is very delicious and altogether exquisite; I do not wonder at your speaking of it in high terms.' 'It is a superb fruit.' 'Most delicious.' Such is the language in which great judges of fruit, accustomed to the finest known varieties, have spoken of the specimen they received. We confidently believe that the time is not distant when it will be found in every fruit-garden of the United Kingdom."

The variety was placed in the nursery of Mr. RIVERS for propagation, and of course, is not in any other hands, out of Syria. The first sale consisted of 24 plants, which were set up at public auction in 24 lots, and were bought by the following parties, at the prices annexed:

	£ s. d.	
Lot	1— 7.17.6	—Mr. Low, Clapton
	2—10.10.0	— do. do.
	3— 8. 8.0	—Messrs. Whitley & Osborn, Fulham.
	4— 6.16.6	—Messrs. Hindman, Pineapple Place.
	5—10.10.0	—Messrs. Whitley & Osborn.
	6— 7.17.6	—Messrs. Hurst & McMullen.
	7— 8.18.6	—Messrs. Veitch, Exeter.
	8— 7.17.6	—Mr. Turner, Slough.
	9— 4.14.9	—J. H. Barchard, Esq., Putney Heath.
	10— 3.13.6	— do. do. do.
	11— 5.15.6	—Mr. Ingram, gardener to her Majesty.
	12— 4.14.6	—Messrs. Youell, Great Yarmouth.
	13— 7.17.6	—Mr. Gaines. Battersea.
	14— 9. 9.0	—The Earl of Derby.
	15— 5. 5.0	—H. Hanbury, Esq.
	16— 8.18.6	—Messrs. Lee, Hammersmith.
	17— 7. 7.0	—S. Rucker, Esq., Wandsworth.
	18— 6.16.0	—Messrs. Lucombe, Prince & Co.
	19— 4. 4.0	—The Earl of Harrington.
	20— 2. 2 0	—Mr. Denton.
	21— 6. 6.0	—Messrs. Henderson.
	22— 7. 7.0	—Mr. Gaines.
	23— 6. 6.0	—Mr. Glendenning, Turnham Green.
	24— 5.15.6	—Messrs. Knight & Perry, Kings Road.
	£164.17.0	

24 small nectarine trees sold at about $820, averaging more than $30 a-piece! The buyers, as many of our readers will see, are chief-

ıy nurserymen, who will set about propagating the sort—but as the earliest time at which they can offer young trees will be in the autumn of 1851—the next sale for the charity fund from the DUKE OF NORTHUMBERLAND'S stock, will probably bring pretty large prices also; though Mr. RIVERS announces that he expects to have 500 plants ready for that sale, which is to take place early this autumn. We trust some of our enterprising nurserymen will secure a plant or two. ED.

GREAT SALE OF SHORT-HORN CATTLE.—We received the following interesting account of Mr. BATES' sale of stock, which attracted so much attention in England, too late for our last number. It will be seen that our friends Messrs. MORRIS and BECAR have secured some of the most desirable animals for this country. Mr. MORRIS is looking very closely into the condition and breeding of the best herds in Great Britain, with a view to improving his own at Mount Fordham, Westchester co., N. Y.—*Ed.*

MY DEAR SIR—The great BATES sale took place yesterday. It was a sight which England never has, nor ever will see again, as to the extent and quality of the herd. The attendance was from three to five thousand persons, from almost all parts of the world. The average price was about 63 guineas, the highest 205, and the lowest price for sound animals 30 guineas. Mr. COLLINGS' sale reached higher prices I believe, but it was when this country was in a more properous state than it now is, and the terms of sale must have been more liberal than these. Mr. BATES' heirs and executors are in chancery, and all business done through a receiver, who made the terms half cash down, and balance on delivery of the animals, which was to take place five or six days, at furthest, from the day of sale; the risk of the animals, immediately on being struck down, was to be borne by the purchaser.

I purchased three head, and NOEL J. BECAR, Esq., of Long Island, whose acquaintance I made on board the steamer, purchased four head.

I did not make my purchases until I had examined all the herds of any note in the counties of Yorkshire and Durham, which is the finest short-horned section in the world; and even then I did not make my final selection until I had *re-examined* Mr. BATES' herd several times, and the only animals I bid for I purchased. If I can get a complete list of the sale before the time of mailing this I will enclose it to you, but I am fearful that even this will not be in time for the steamer of to-morrow. I remain yours, respectfully, *L. G. Morris. Kirk Leavington, Yorkshire, May* 10.

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STEAM CULLURE.—"Have you heard," says a writer in "Chambers' Edinburgh Journal," "what the Recueil of the Societe Polytechnique" says about a new mode of turning waste steam to account? The proprietor of a factory took it into his head to introduce his waste steam under the roots of Pine-apple plants; and such was the combined effect of heat and moisture that a magnificent crop of ripe fruit was the speedy result, and of a much finer flavor than usual, owing to the growing part of the plant having been daily exposed to the open air."

This is a subject to which we gladly direct attention, for we have long felt convinced that the true places for forced vegetables and fruits of all kinds are near fixed steam engines, whose waste steam will supply all the heat that is required, without the cost of a farthing for fuel. While glass was dear this was a suggestion which it would have answered no good purpose to have made; but now that timber is cheap, glass about one-sixth of its former price, and that bricks may be expected to fall 50 per cent., it is evident that we want no Lisbon for early peas, or New-Providence for Pine-apples, or even Penzance for winter broccoli, but that all such produce may be grown cheaper, and as well or much better in every manufacturing town.

As matters are now arranged the heat belonging to the waste water of steam engines is utterly lost, instead of being economised, and applied to the production of food, or luxuries, in both the animal and vegetable kingdom. There is no conceivable reason why ponds should not be warmed, and made to produce magnificent marketable fish, bred beneath the foliage of water lilies and other beautiful aquatics of hot countries, while the ponds themselves impart a gentle warmth to the neighboring soil, teeming with early kidney beans, early lettuces, early asparagus, early salads, green peas in March; peaches, plums, and apricots in May, with grapes and Pine-apples at all seasons. To effect this, little labor is wanted, no great elevation of roof, no wide span, involving costly rafters of timber or metal; but a series of low span-roofed pits, half sunk in the earth, to save materials. In such places the waste water would give warmth and moisture; the moisture might be regulated by various cheap mechanical contrivances; and by the application of a little steam power the atmosphere of such places could be kept in any degree of agitation that might be required for the healthiness of the vegetation. In short, summer breezes might blow, at the command of a screw, even though the external air was that of Iceland at Christmas.

The difficulty that gardeners experience with forced crops arises from the impossibility of ventilating them—from the difficulty of keeping the earth, in which the roots grow, warm without over-heating—the air, in which the leaves grow, dry without withering—and in maintaining a proper temperature without such a consumption of labor and fuel as render the charges to a consumer such as to excessively limit all sales. At the side of manufactories all such difficulties vanish. The power which works the looms and the spinning-

wheels will also work the houses in which plants are grown for market, without the effort being felt, and with little aid from manual labor. Canadian timber cut at the sawmills, duty free bricks, glass at 4d. a square foot, a little engineer's work, and a clever gardener, will furnish all the rest.

Suppose that a tank made of bricks, lined with inch Canadian planks, and six feet wide, were caused to enclose a given area; that the tanks were surrounded by twelve feet beds separated by pathways from the outside walls, and that the area enclosed by the tank were divided into six feet beds accessible by narrow sunken paths. It is evident that by a series of ridge and furrow roofs any such area may be perfectly covered over; and it is equally evident that, by some mechanical contrivance, such for instance as HURWARD'S screw of JONES and CLARK'S rack and quadrant, the whole of such roofs could be opened or closed at pleasure, without the least difficulty. The water from such roofs might be carried off through hollow brick supports, upon which the wall plats might be made to rest; and if the soil were dry enough, the whole structure, except the roof, might be sunk, so as to avoid the cost of thick outside walls, and to retain the heat extricated from the tanks. Head-room for working under might be obtained by excavation, and the earth so excavated would make the raised beds, which would be necessary in order to bring the crops close to the light. It is probable that air-heat enough for most crops would be obtained by this arrangement alone; but if it were otherwise, glazed pipes could be adapted laterally to the tanks, and made to convey more heated water to any place in which it could be required. In the same way subterranean irrigation might be effected; and in short every application of heat and water of which a gardener has need.

In such buildings plants would be grown as in the open fields, beds of radishes and spring onions in the coldest parts, beds of strawberries in others somewhat warmer; seakale and rhubarb in chambers under the footpaths; lettuces, endives, and all sorts of winter salads in the same quarters with radishes and spring onions; Pine-apples in the warmest parts; vines on the rafters, at such a distance as not to ovorshadow the crops beneath them; peaches and nectarines and apricots, with figs, plums, cherries, raspberries, and the like, in dwarf orchards apart, with the same crops beneath them as in the open fields. All this might happen in winter; in May the glass roof might be wholly removed, and the ground cropped as a market garden, with this great advantage that still there would be an advance upon the seasons, and that the genial warmth of the tanks and under-ground channels of heat would give to English crops an excellence now only known in the sun-heated soil of southern countries. The experiments upon out-of-doors cultivation of the Pine-apple in summer, so cleverly tried at Bicton by Mr. BARNES, the gardener to Lady ROLLE, have conclusively established the fact that Pine-apples thus produced are infinitely better in flavor than such as are nursed in a common hot-house. It is probable that they would not cost much more than cabbages; and at all events that if sold at the price of the wretched things called West Indian Pine-apples, they would yield a great return to the grower.

In this way quite a new description of market gardening would spring up, a new employment for labor be discovered, and a new field for the profitable investment of capital. When carried out, Paris and Berlin and Brussels may be supplied with forced fruits and vegetables from Manchester, and new elements of national competition be thus introduced, by which all may largely benefit.

This kind of gardening is not, however, precisely what the writer in CHAMBERS' has referred to. The subject of his remarks is gardening without protection of any sort, by aid of earth heat alone; quite a distinct question, to which we may address ourselves next week. *Gard. Chron.*

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GRAPE-VINES IN A GREEN-HOUSE.—In looking over a mass of letters, before consigning them to the waste paper repository, I stumbled upon a statement of our editor's, that "vines, &c., grown in a green-house will come under your department." If I had not thus afresh been reminded of my duty it would have been no great matter for regret, as those who wished for information could easily find what was suitable to themselves in the statements of that veteran authority who provides over the fruit department. As some, however, might imagine that what was said respecting the forcing of vines could have but a remote reference to those growing in a greenhouse, which might be said to be gently assisted rather than forced, we shall at times advert to a few prominent points, and the first of these shall be the

Pruning.—It has been said that the donkey first taught the art of pruning the vine; man being merely an imitator, after seeing the effect of that very wise but much abused, and nicknamed *stupid* animal, cropping the points of the young shoots. Be this as it may one thing is certain, that seemingly trifling facts when reasoned upon evolve great principles. Even in countries where the vine is a native, climbing the rock and festooning the tree, pruning is resorted to; and how much more is it necessary under our glass roofs, where the concentration of the greatest possible vigour and fertility in the smallest possible space is the chief object aimed at. When once the matter is thoroughly understood, the process of preparing for pruning by *disbudding* in summer will become the chief subject for consideration. The whole ofothe phytological questions involved in such a

system we could not now find room for, though the unfolding of them would shed a light over many directions that, to the uninitiated, seem obscure and contradictory.

This *pruning* is best performed in the autumn, when the leaves are fast losing their green color, for then, though there will be little assimilation of fresh matter, yet the slow vital action still continued will swell and distend the parts retained, much more than if that action had been extended over the whole of the branches, and more especially if these branches to be cut away had been gradually deprived of their buds, though the leaves had been allowed to remain. The leaves on the stem, or parts left, should be allowed to hang until they drop or become yellow. Shortly after being cut, whether upon the alternate rod or the spurring system (the last being the best for a green-house,) the shoots may with propriety be unfastened from the roof, and trained horizontally along the front inside; the advantages of which will be the enabling the plants on the stage to receive the whole of the light from the roof unobstructed, the preventing the necessity of getting among the plants for picking up fallen vine leaves, the keeping of the vines more cool if much fire is needed during the winter, and the ensuring a more equal breaking of the buds in the spring from the whole of the stem being placed in a similar temperature.

Now, says one of our friends, this is all very well, though rather tantalising to some of us; for there, now, are my vines that were neither disbudded in summer nor pruned in autumn, but they are safe enough yet, because no more fire has been used than to exclude frost. But there is my kind neighbor, *Mr. Meanwell*, who was resolved to give me the go-bye this season, and astonish my family as well as his own with his early geraniums, fuchsias, &c.; but he forgot that the heat he gave to his flowers would accelerate his *unpruned* vines, and now he is in a pretty quandary, for his vines are all upon the move, and his favorite Sweet-water has pushed nearly half an inch; and when he tried to prune them, the cutting of the smallest shoot brought such a flow of sap, that—fearful it would act like a small *syphon* when employed to empty a wine barrel—he had recourse for stopping it to plasters of pitch, resin and wax; all of which evils might have been avoided if we had been *repeatedly* told to cut vines "in the autumn."

In all such matters we hold two principles: the first is, that apologies and bemoanings for evils and derelictions of duty will not rectify the matter; the second is, that it is better to attempt to remedy what is wrong *late* than *never*. To our friend, therefore, we say, prune your vines directly before the sap is in motion, and keep the house as cool as you can for several days afterwards. To his neighbor we say, let pruning alone. Some wise men would say, prune by all means, and let the vines bleed if they will; the expanding shoots will soon monopolise the juices that are *left*; we think not so lightly of wasting these juices. When the vine is fully in leaf it may be cut then with impunity, so far as bleeding is concerned; because the double processes of assimilation of fresh matter and the perspiration from the leaves will leave no unappropriated fluid to bleed. Thin and prune these vines when they are in leaf, and let them alone until then. No! here there would be a waste of energy; fertile vigor would be dispersed over many channels, to be afterwards discarded, instead of being concentrated upon a few that were destined to be retained. Besides, the check given to the reciprocal action between the roots and the branches would cause a considerable time to elapse before the branches left would receive more nourishment, in consequence of the others being removed. What is to be done then? Simply and quietly go over the vines when the buds are from a quarter to half an inch in length, or even more, and with the thumb or fore-finger quickly *rub* off all the buds upon the wood which you resolve ultimately to remove, and no bleeding will ensue. Mind, you must not *cut* them off close to the wood from whence they issue, or you might as well cut off the shoot at once. Any time after the plant is in full leaf you may remove the disbudded parts, which will often present different appearances; generally, if very long, most of them will be dead, some will be somewhat alive, though not increased in size, and in a few there will be a little exudation of cambium matter from the liber, or inner bark, where the bud was rubbed off.

By this means, therefore, the resources, of the plant are pretty well as much husbanded and directed into defined and desired channels, as if pruning had taken place in the autumn. The buds left will be invigorated, though at first they will not be able to monopolise all the sap that supplied the others. Hence, for some time the sap will rise into the disbudded part, and deseend again when the stimulus is removed, until the greater expansion of the buds left monopolise it entirely. A similar operation you may see, in working *rapidly* the handle of a pump, where the bore of the tube is larger than the delivering jet. The water will rise above the jet; but that would not be the case if the jet was larger in size. The rising sap, therefore, may be made to flow upwards, downwards and horizontally, to where there are vents for its reception; and where none exist in the shape of buds and branches, it will make them for itself, by stimulating the organisable matter stored during the previous season. Its general course, however, is upward, and, therefore, in the vine the largest buds are generally formed near the points of shoots, a matter of great importance, so far as budding and pruning are concerned; but that will enter more into summer management than what is necessary to be at-

tended to now. The matters referred to, are as important in other plants as in the vine, though they may not show mismanagement so quickly. Much evil has been done by two classes of phytologists contending with each other—one asserting, that it is the swelling of the buds that causes the ascent of the sap; the other asserting, that it is the rise of the sap that causes the buds to swell and expand. Before the principles of pruning can be well understood, these contradictions must be harmonised. And they may be perfectly so, for both are right. The expanding of the buds, and the rising of the sap, are each in turns relative and co-relative cause and consequence to the other. No wonder though wise men smile at us, when from looking at a fact from different points of view, we squabble as lustily about it as those clever fellows who were within a little of *cudgelling* each other, because about the *chameleon's* color they could not agree. *R. Fish, in Cottage Gardener.*

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Woolen Rags as Manure.—Many of our readers are old enough to remember the ridicule with which the proposition to use bone-dust as a manure was received by the cultivators of the soil; and they must have heard, as we often have heard, the contemptuous query, "What! old knife-handles good for manure?" That ignorant prejudice has passed away; but another equally erroneous may arise in the mind of some of our readers, when they find that woolen rags as a manure are the subject of our present observations. We are led to make these by two letters from very different parts of England; one asking, "Why the Kentish hop-growers turn woolen rags into the soil of their hop-gardens?" and the other, which may serve in part to answer the query, is from Mr. James Derham, of Wrington, near Bristol. He says:

"What do you think of woolen rags for manure? In the lower part of this county (about Crewkerne) cultivators attach great importance to them. There are a great many field-gardens there, and an immense quantity of *onions* are raised in the neighborhood. No one thinks of sowing unless he has dug in woolen shreds. These are collected all over the county, and sold at so much per cwt. I was round there the other day (March) and saw many wagon-loads of them; and in one or two instances I saw them plowing them in for *corn* (*oats?*). They tell me they put no manure besides; and if this really is a good thing, how very easy for many persons to accumulate a stock. I have a large heap myself, and should be glad to know your opinion as to the use of them. I have thought if they were first soaked for some days in liquid manure, it would *improve* them. Would they not do to apply to fruit trees in that state?"

Soaking the rags in liquid manure would be a very good mode of applying the latter, and there is no doubt they would do well in combination; for the liquid manure would be for the immediate use of the plant, while the rags, being slow in decomposing, would serve it during the after stages of growth. They would do better for fruit trees without being so soaked, for these trees, except when growing in very poor soil, require no stimulating like that afforded by liquid manure.

Woolen rags are by themselves, however, a good manure; and the willy dust, and other woolen refuse, so abundant in the great clothiery districts of Wiltshire, Gloucestershire, and Yorkshire, come within the designation of woolen rags; and as they slowly decompose in the soil, they all give out food highly useful to plants. During decomposition they produce ammonia and other matters soluble in water, every hundred parts being composed, like feathers, hair, &c., of about 50 parts carbon or charcoal, 7 parts hydrogen, 17 parts nitrogen, 24 parts oxygen and sulphur, and 2 parts saline matters. These last contain carbonate of potash, muriate of potash, acetate of potash and lime, all of which are salts, or bases of salts, useful to cultivated vegetables.

We can quote many practical authorities as to the value of woolen rags as a fertilizer. Mr. R. Slack, paper-maker, of Hayfield, Derbyshire, has used them for many years. He finds them good for *potatoes;* and adds, "for *hay grass* I have nothing that will produce so good a crop, spread upon the land in January, and raked off in April."*

Mr. J. M. Paine, writing in 1848, says that he had long been in the habit of using fifty tons yearly, paying for them in London from fifty to eighty shillings per ton; the dearest being those containing the most wool. Before putting on the land, they are cut into very small pieces, (two inches square being the largest,) and from one ton to half a ton per acre are sufficient. He finds them most beneficial to *hops* and *turnips*.

They are not so good when used mixed with lime; for although this decomposes them faster than when they are left to themselves, yet by such treatment the ammonia is driven off, in which their most active power is comprised.

We believe that the best mode of applying woolen rags to the soil is to mix them previously with the super-phosphate of lime, made from bones. This contains sulphate of lime also, which will fix the ammonia of the rags as they decompose, and the phosphate of lime is a saline manure, in which the rags are deficient.

Mr. Cuthbert Johnson, in his excellent volume on "Fertilizers," says, that "woolen rags

* Our own experience tells us that woolen rags are most useful to *potatoes, strawberries, and raspberries.*

are a very durable manure, remaining dissolving in the soil, and forming elastic and soluble manures for the service of plants, for periods varying from two years on heavy clays, such as those of the Kentish hop-grounds of the Weald of Kent, to three or four years on the light chalky soils on the valley of the Kennet in Berkshire. Of these rags, the consumption by the Berkshire and Oxfordshire farmers, but especially by the Kentish hop growers, is very considerable. I am informed by an extensive dealer in these rags, (Mr. Hart, White Lion-street, Bishopgate,) that 20,000 tons, at the least, are annually consumed by the farmers of the south of England. Mr. Ellis, of Barming, Kent, purchased annually between four and five hundred tons, almost exclusively for his hop-grounds. The cottager, even, is interested in these facts, for every shred of an old woolen garment is available for his garden—is an admirable manure for his potatoe ground; or, if he has not a garden, the collectors of rags, who gather for the large dealers, will readily give him a farthing per pound for all he can collect. *Cottage Gardener.*

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Management of Pear Trees.—The practice of what is termed root pruning has of late years attracted a good deal of notice. Root pruning is, however, no modern discovery. It has been followed less or more for a century, and perhaps even longer; but the system of docking the roots, and dwarfing trees, is somewhat new in this country, although well understood in the Celestial Empire. The result of this practice has been the production of stunted, bark-bound trees, the fruit from which partakes more of the character of the wood of the tree than that which we desire to find in a plump, well-grown Pear. I therefore take this opportunity of cautioning my amateur readers on a point which, to my personal knowledge, has sadly misled many of them. It may be stated, and in fact recognised as an axiom, that unless a tree is in a kindly growing condition, the fruit will at all times be inferior. Let it not be inferred from this that I mean over-luxuriance; in that case wood alone will be made.

Pears should be generously used when they are first planted; the ground should be in good heart, and manured near the surface. If in the course of a few years the trees indicate a tendency to produce more wood than is desirable either as respects the fruitfulness of the trees, or out-growing the limits originally assigned them; then cautiously examine the roots, and carefully curtail their exuberance, but this should be done by degrees, and the month of August should be preferred to any other for the operation.

The most important point in the management of Pear trees hinges on the summer pruning; many imagine that when the trees are planted there is nothing more to be done, except picking the fruit. This notion has converted some little gardens into little forests. During summer let the superfluous shoots be stopped back to within 3 inches of the old bearing wood, broken off rather than cut. This will cause flower buds to be formed at the base of the shoots so treated. The projecting part can be removed in autumn or winter close to the fruit buds; by following this mode of treatment the trees will be kept within a limited space, and their productiveness secured. *Gardeners' Chron*

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Continuous Blooming Roses.—I am preparing to give your readers a descriptive list of a few roses which I have called continuous blooming; but in truth none can be more so than the two which may be found in front of many hundred English cottages, and known as the common and crimson China. If the cultivators will but take the pains to remove the flowers as they fade, and prevent the seed-pods from swelling, they will not fail. I have been trying them on standards with varied success, because I have found that a frost which does not injure a plant on a wall or house front cuts off many of the young buds on the head of a standard. I have many standard Chinas of different varieties, and some called Noisettes, a score or two of which more or less partake of the character of the old China; but as they have only blossomed one season, I am not satisfied that I have seen enough to justify a positive opinion. I will merely say that among the nearest approach to my desideratum, and at all events much longer in bloom than many others, I may mention first the Noisette Fellenburg, flowering from the end of June to the end of November, in a strong clay soil, seven miles north of London. This is bright crimson, flowers double and small, joints short as the crimson China, and it has stood out three winters in a bleak situation, without protection of any kind, on ground but poorly drained. I will look over my notes, and give a few more, that even the first year of planting give promise of covering very close when fully established. I observe this rose is noticed elsewhere, but all the florists together cannot say too much of it, and those who want a few cannot do better than order Fellenburg, and as many more as they require "of the same habit and season." *Ib.*

Massachusetts Agricultural School.—The Legislature of our sister state has placed the subject of an agricultural school in the hands of the following commissioners, who are to draw up a plan, etc.: Marshall P. Wilder of Dorchester, Edward Hitchcock of Amherst, Thos. E. Payson of Rowley, Samuel E. Eliott of Boston, and Eli Warren of Upton.

This is an admirable board, and we are heartily glad to find the name of Hon. M. P. Wilder, President of the Mass. Senate, at its head. Col. Wilder unites, perhaps more completly than any man in Massachusetts, a thorough knowledge of what an agricultural school should be, with that indomitable perseverance and energy which enable him to develop a good idea into an existing fact. It is not enough to *recommend* plans to legislative bodies, (as the commission in this state found last winter.) There must be a champion of steel ready to answer all objections and demolish all opponents. For the very good reason that we think Col. W. such a man, do we congratulate the state on the excellent selection made by the governor.

President Hitchcock, of Amherst who is now abroad, will, we learn, undertake to investigate thoroughly the condition and management of agricultural schools in Europe.

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Clinton Point Vinery.—In reading our account of this vinery, of which we gave a plate and description in our last volume, many good cultivators were astonished at the magnificent crop produced by vines actually of but one year's growth in the borders, and not a few predicted that the vines had been permitted to bear too large a crop, and would therefore be greatly injured by it.

We confess that observation in similar cases would have led us to entertain the same opinion. But Mr. Van Rensselaer has convinced us that we were in error. The condition of the vinery is most admirable. The vines are not only strong and healthy, but have set a very fine crop—the bunches unusually large and perfect. Any cultivator may judge for himself of the satisfactory condition of the vinery by the following statistics: The number of vines in the house is 54; number of bunches cut the first thinning 864; number of bunches cut the second thinning 684; number of bunches left on the fifty-four vines 590. It must be remembered that these are partly trellis vines, and are not all trained to the rafters.

It by no means follows from this result, that all vineries may be allowed to produce fruit heavily the second season after they are planted. But we think Mr. Van Rensselaer has conclusively proved that a large crop of the finest grapes may, *if the border is very thoroughly prepared*, as in this case, be grown without the slightest injury to the vines. Indeed, give the grape plenty of food, and one may do almost anything with it.

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Burr's Strawberries.—I perceive that "Burr's new Pine" strawberry is described by Mr. Huntsman and by Mr. Prince, in the third volume of the Horticulturist, pages 67 and 70, as a *"pistillate"* variety. Last spring, I obtained a few plants of that sort, in connection with one of my neighbors, from Mr. Ernst, of Cincinnati, and I find that at least three-fourths of the blossoms are perfect, or hermaphrodite. I enclose a specimen, hoping that your experience can inform me whether they are genuine or not.

When in London in March last, I procured some plants of the "British Queen," which is *the* strawberry of Covent Garden, but they died on the passage. Can you inform me where I can obtain them in this country? Yours, truly, *B. Poughkeepsie, N. Y., May* 18, 1850.

We had some of the same plants from Mr. Ernst last spring, and Mr. E. has made an error in disseminating them, which, of course, he will take pleasure in rectifying. The true "Burr's new Pine" is *pistillate*, and has been extensively sent out to various parts of the Middle States by the nurserymen at Rochester. We have seen plants from Elwanger & Barry and Bissell & Hooker, blossoming in various gardens lately, and all correct.

Some of our readers, who have the British Queen for sale, will oblige us by answering our correspondent through our columns. Ed.

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Burr's New Pine Strawberry.—We have just received from Mr. Ernst, a letter stating

that he had, to his great mortification, discovered the error referred to, and had promptly returned the amount paid him by his correspondents here and at Poughkeepsie. Mr. ERNST informs us that he fell into error, in this case, not from want of care, but from the very desire he had to put the genuineness of the plants beyond a doubt—for he procured the plants referred to from Mr. BURR himself. We have before us a letter from Mr. BURR to Mr. E.. in which Mr. BURR deplores the mistake, and attributes it to the fact that the person to whom he delegated the task took up plants from a part of a bed where they had run together.

We will take occasion here to say, that though mistakes will sometimes inevitably occur in commercial establishments, from the necessity of propogating so large a variety—amateurs, who cultivate but small collections, when they undertake to send out a new or remarkable sort, have less apology for inaccuracies,—and they are held the more responsible, when the new variety is one originated by themselves. We have in our garden a case in point. A year ago a correspondent in Washington sent us, as a *present*, a new climbing rose of reputed wonderful beauty, the flowers "yellow, striped with brown." Plants were not to be had at the time less than $25 each! We therefore gave a little special attention to the valuable present, took off our hat to it (mentally) as we walked by it, and conjured up the vision of clusters of yellow roses with brown stripes that would burst upon us the following June. Well, June is here, and the rose—the wonderful rose, is —a poor, common, semi-double Ayrshire! If our correspondent were here to see it, we are not sure that he would turn into a "pillar of salt," but we think he wonld be more dumb than a pillar of roses.

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ALBANY & RENSSELAER HORTICULTURAL SOCIETY.—The first exhibition of this Society for the present year, took place on the 18th of June. Owing to the uncommon backwardness of the season, several articles, especially strawberries and roses, were not sufficiently advanced to make a large display; and it was, therefore, deemed expedient to omit the awards on fruits, and adjourn the competition in that department until the 27th. In several classes of flowers, also, there were no awards, for want of competition, and in all such the competition was kept open for the 27th; on that day the show of strawberries was very large and fine—acknowledged by all to be superior in extent and quality to any they had before seen. It comprehended all the most esteemed varieties known. The first premium for the best and most extensive collection, was awarded to LUTHER TUCKER, who showed twenty-three varieties; and the second to JOHN S. GOOLD, who showed nine varieties. The first premium for the best and finest flavored variety, was awarded to B. B. KIRTLAND, for *Burr's New Pine;* and the second premium to E. C. McINTOSH, for Hovey's Seedling.

Among other varieties which received high commendation, were *Royal Scarlet*, *Burr's Mammoth*, *Burr's Columbus*, (very prolific,) *Ross Phœnix*, and *Old Hudson*.

There was a very handsome show of roses and other flowers, and a very good display of vegetables, considering the backwardness of the season. Some fine specimens of early cherries were exhibited; but they required several days more to bring them to a state in which they could be fairly appreciated.

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FRUIT CULTURE IN THE WEST.—I am doing something towards supplying this region with good fruit—with, however, but little profit to myself, owing principally to our changeable climate, (Lat. 39° 20′, Long. 94° 33′ 30″)—this being the most westward village in the United States. I know something of the manner of cultivating in the valley of the Mohawk, but after five years' trial here, have not succeeded.

I recently became a subscriber to your invaluable periodical, in which I discover many of the causes operating to my disadvantage—one of the prominent is our hot summer sun. Many of my weaker apple trees make quite a curve the reverse to the 2 o'clock sun. Will whitewashing counteract this, as well as the premature moving of the sap in the winter?—if so, will stucco wash do? [Try white-wash, with about one-third wood ashes added to it. Better plant your orchards on the north sides of hills in all cases—if your district is hilly. ED.] Another prominent source of evil arises from dry summers, usually followed by wet growing autumns, having the appearance of spring, often extending to the verge of winter—producing immature growth of wood. The first symptom of trouble after such a season, is the bursting of the bark at the surface of the thriftier varieties of apple trees, upon the first slight frosts. This, however, I remedy by wounding the bark at the surface, in most any manner, during the summer, so to produce a cicatrix, or run the knife spirally around the tree from the surface six inches upwards. But this does not remedy the evil wholly, for if a severe winter follows, the heartwood becomes doted, with all the bad results following in its train. I practice mostly root grafting. How can I check the growth of my trees in time to mature their wood? [By root pruning, or laying the roots partially bear. ED.] I have a hearty, thrifty, growing variety of apple, a native, that appears to resist all vicissitudes—will it do to use it as a stock for the more delicate varieties? If so, at what height should they be worked? [No matter what height. ED.] In giving you an idea of the eccentricity of our climate, I will state that I once saw apple trees in bloom on the 26th March, which produced an abundant crop without interruption of frost. But at this date we have severe frosts, night after night, and no more appearance of spring than a month since.

This operates severely upon the California emigrants, who are congregated here by thousands, waiting for grass. The fall of '45 continued until about the 18th Dec. pleasant and warm, the thermometer frequently at 75°, which it was on the 16th, and on the 20th 6° below 0! Similar changes often take place during the winter. I shall keep a weather table, and if you can make it serviceable, I will send you the result. [Will be glad to see it.] Yours, respectfully, *F. Hawn. Weston, Mo., April* 11, 1850.

P. S. The soil on which my nursery is situated is a strong limestone, producing 50 bushels of corn per acre with little labor, and rolling. The original growth of timber was Hackberry, White Hickory, Walnut, Elm, Linn, and different Oaks, but no White Oak.

After a continued severe winter, or an open winter with severe weather after, the roots of many of the apple trees are mostly killed, particularly the fibres. *F. H.*

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Boston Hort. Society.—*Dear Sir:* I was much gratified with half an hour passed in the exhibition room last Saturday, and made a few rough notes, which I send you for publication.

In the first place, those floral giants, the *Tree poenias*, had a grand time of it, and the show of them by various contributors was larger than ever before seen in this state, and as I presume in the United States. Among the contributors of this most *buxom* and altogether most magnificent of spring flowering shrubs, were Messrs. Breck & Co., Cabot, Wilder, and Hovey & Co. By far the largest collection was from Col. Wilder, who presented 80 flowers in 16 varieties. The most distinct varieties were *P. rosea superba*, alba plena Belgique, Newmanii, Hissieina, Grand Duke of Baden, Le Soleil, Imperatrice, Josephine, Walnerii, rubra splendens, ocullata, and Heldii.

Mr. Breck showed a superb specimen of *Wistaria sinensis*. The novelties that attracted most attention were Mr. Barnes' new French Verbenas, and Col. Wilder's seedling Calceolarias. The Verbenas were Iphigene and Reine de Jour, both remarkably fine and distinct—superior to Robinson's Defiance. The Calceolarias from Hawthorn Grove were exquisitely beautiful—or rather most delicately grotesque, for they resembled clusters of delicately spotted tropical insects, half-poised in the air, as much as flowers.

The show of flowers and shrubs was fine, and of Hawthorns and Azaleas the variety was particularly rich. These were chiefly from Messrs. Hovey, Breck, and Kenrick. Miss Russell and Miss Kenrick contributed some *boquets en corbeille*, charmingly arranged.

Mr. Allen, of Salem, as usual, carried off the prizes for forced fruits. There were 17 dishes of ripe grapes from his vineries, on the tables, four varieties of large well-ripened cherries, besides figs, nectarines, and peaches. Some remarkably large and fine clusters of Black Hamburgh grapes from Mr. Bigelow of Brighton, were much praised. Yours, *A Looker-on in Boston. June* 10, 1850.

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Strawberries.—*Mr. Downing*—A fortnight since my gardener produced quite a sensation among the juveniles of the household, by apprising us that from a large and thrifty bed of strawberries, (Hovey's Seedlings,) then in full bloom, we should not gather one berry. And sure enough, upon investigation all the plants were pistillates—when I directed him to transplant from a distant bed of other varieties, some stamanate plants, and place them carefully among the Hovey's Seedlings—and the result is an abundant show of fruit.

The effects of this horticultural wedlock will not surprise you, though it may interest some of your readers. *Evelyn. Dutchess Co., N. Y., June*, 1850.

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On the Virtues of Spent Tan-Bark to the Horticulturist and Florist.—Although averse to repeat thrice told tales, or to recapitulate what I have for the past twenty years both written and orally advised horticultural friends, respecting the the many virtues of spent tan, I am induced, the more from your note appended to Mr. Cleveland's article, to make a farther record of my experience with that article, especially as it is so generally condemned, *ignorantly*, as a dangerous if not an useless substance in the garden. On the contrary I believe, and practice has satisfied me, that where it can be readily procured, it is a grand auxillary and highly to be prized.

In detailing you the following experiments, I beg leave to say, they are all from my own practice and observation.

1st. A ton of *spent* tan, plowed or spaded under, and well comminuted with a stiff clay soil, in the fall of the year, will render such a spot fit for gardening purposes, sooner and better than ten tons of sand. It creates permeability, friability, and warmth, and decomposes, when thus covered, in the course of two or three years, giving great fertility to the soil. A stiff clay should have ten or fifteen per cent of fresh tan spaded to the depth of a foot or more, repeating the dose for a season or two. On such a spot, with other of course proper manures, I have had a fine garden, yielding such crops of asparagus, beets, carrots, &c., &c., as rarely to be found on sand or gravel soils.

As a mulching for strawberry beds, it has no equal. Put it on two or three inches thick. It warms the ground and prevents the plant *heaving* during the thawings of winter; and withal, it is the cleanest and sweetest article for the berries to lie upon—besides keeping the weeds down. The runners readily strike through it. Some use sawdust or turners' chips, which do tolerably well, but are not at all equal to spent tan.

As a mulching for dwarf pear trees, the gooseberry, and other fruit trees or shrubbery, it is cap-

ital, as retaining both heat and moisture for a long period. Where it cannot be obtained, the inverted grass sod stands I think next best.

For mulching vine-borders, I have used it many years, and endorse fully Mr. CLEVELAND's trial with it. But there are other virtues possessed by it, which I think are as yet but little known,—among which the power it possesses of drawing new roots, and giving new vitality to dried and apparently dead trees, such, for instance, as have been recently imported, or otherwise long out of the soil. The roots and tops being properly pruned, bury them nearly in a borizontal position in a bed of fresh tan, [fresh? does not our correspondent mean *spent* tan? ED.] having a small admixture of clean sand, a portion of the tops only being left out. Should the tan be rather dry, wet it once well with rather hot water, and in ten to twenty days, I have found pear trees, roses, camelias, rhododendrons, and other shrubs, not only to have made beautiful roots, but the latent and apparently dead buds bursting and completely rejuvenated. The careful cultivator, however, will not fail at that point to watch them, that they may be suitably planted and shaded, &c., &c.; otherwise exhaustion and depletion must necessarily follow.

In my green-house I have a table of tan six inches deep, for placing pots on, it being sweeter and free from mouldiness, and is withal vastly neater and better than any other material for such purpose. In this bed I have been astonished to see how rapidly roots will pass the bottom of the pots, and wander among the tan. A Passiflora in a season rambled ten feet, throwing up fine shoots, ready for potting. A Chasselas Fontainbleau grape in front of the house, with rods touching the damp table, sent roots into the tan, which were potted off and bore the following season. Indeed, either tender or hardy plants seem to delight and readily take root in it. And as a material for sticking cuttings, when slightly mixed with sand, or as a drainage for pot culture, I know nothing better. *W. R. Coppock. Long Sight Place, Buffalo, N. Y.*

REMARKS.—Tan bark is likely to become popular in gardening, judging from the advocates it finds. We know little of its direct value, but we believe it will be found excellent for *mulching*—one of the greatest means of good cultivation in this climate. Tan, *fresh* from the pits, we know will injure some plants.

Professor MAPES, in his excellent Working Farmer, has the following note to the point—which explains why tan-bark is so well adapted to grape-vines and strawberries:—

"We observe that Mr. CLEVELAND has made a single experiment in the application of spent tan bark about the roots of an Isabella grape, and cautiously recommends it. We know the caution of Mr. C. renders his recommendations always defendable, but he need not fear recommending the use of tan bark for grape-vines, or for any thing else that requires *tannic acid*. Both grapes and strawberries contain a trace of tannic acid, and we last year applied a solution of bark liquor to our strawberry beds with marked advantage."

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HARDINESS OF PLANTS IN NEW JERSEY.—Agreeably to the wish you expressed in the May number of the Horticulturist, for information as to the hardiness of newly introduced trees and shrubs, I send you a list of a few things—principally pines—which have proved perfectly hardy the past winter:

Abies kutrow,	Cedrus africanus,
—— douglasii,	—— deodara,
Picea pindrow,	Juniperus excelsa,
—— welbiana,	—— hibernicæ.
—— altissima,	—— suecicæa,
—— acutissima,	Cupressus elegans,
—— cembra,	—— torulosa,
—— gerandiana,	Araucaria imbricata,
—— pinaster,	Mahonia acquifolium,
—— pinea,	Euonymus japonica,
—— pyrenaica,	Spirea prunifolia, pl.,
—— taurica,	Forsythia viridissima.
—— morinda,	

I could send a larger list of pines, but thought it unnecessary to send any but the more recently introduced ones. *Plumbago larpentæ* has stood out with a slight protection. The flower buds of the *Paulownia imperialis* have been completely killed with us, although the winter was more mild than usual. Respectfully yours, *Jas. Goldie, Gardener to R. L. Colt, Esq., Paterson, N. J., May*, 1850.

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VINERIES.—I wish to solicit the attention of those of your readers who contemplate erecting vineries, or who feel interested in the cultivation of house grapes, to a few descriptive remarks on the Vineries of WM. NIBLO, Esq., situated at Yorkville, (on 84th st., New-York,) near the East river.

I visited these houses a few days ago, and I certainly did not regret having paid this visit, for I never saw vines in a more healthy, vigorous condition than these are in at the present time.

Mr. NIBLO erected these houses some six years ago; there are four of them, besides a handsome conservatory which adjoins the mansion. The latter is well stocked with fine large Rhododendrons, Camellias, Acacias, &c. There are about 2,000 feet of glass in these houses; they are built in a very neat and substantial manner, well supplied with water, &c., &c. Three of the vineries range parallel with each other, and are each sixty feet in length, with span roofs; and the fourth is a "lean-to," with an excellent propagating house at the back, and is 50 feet long.

Rather more than two years ago Mr. N. engaged the services of Mr. GALBRAITH, (his present gardener,) who is well known as one of our most successful cultivators of this delicious fruit, to take charge of his houses. When Mr.

G. assumed this charge, he found the vines in a very bad state; although planted four years, they had not then matured a single bunch of fruit. Mr. G. soon discovered of course the effects of bad soil, bad culture, or something or other wrong about them, and as, like a sound reasoner, he usually goes back from effect to cause, he thought the most expeditious, and most certain way to discover the cause was to dive at the root of the matter, and to the roots he went, with spade in hand, and dug them all up, every vine; this was in April, 1848. He found that the roots of most of the vines had rotted half away, and all of them were in a sickly unhealthy state, chiefly for the want of proper drainage to the borders. He immediately went to work, drained the borders well, got a suitably prepared compost, and after shortening-in the roots well, he replaced them again in the new border.

One of the houses had been occupied during the winter with green-house plants, and the temperature necessary to keep the plants from freezing, had started the vines into growth, and when the operation above described was performed on the roots, some of the young shoots were from three to four feet in length, and had showed some bunches of fruit; notwithstanding this, they were so managed that not a single leaf flagged, and those bunches were ripened the same summer. Last year they produced a fair crop, and this year they can be seen in full fruit. Owing to the very severe weather we had a few weeks ago, Mr. G. informed us that it was with great difficulty that he could keep the temperature sufficiently high in the span roof houses to "set" the Muscats; but however, they now look as promising as most of the others. The house "No. 4" was planted with young vines, 17th April, 1848. Last year they were allowed to bear a few clusters, and now they are literally covered with fruit from the bottom, half way up to the rafters.

I have been induced to send you this communication, partly from having witnessed and heard of so much disappointment and so many failures in house vine culture. These failures generally occur in this way:—A gentleman makes up his mind to build a vinery, he puts one up, sends somewhere or other for his vines, gets as many varieties as he can, perhaps a different sort for each rafter; the border is made—i. e. the soil is scouped a foot deep probably, and two or three wide, and what is thought to be a rich and suitable compost is put in its place. The border is perhaps never examined as to whether it requires drainage, or whether the subsoil is of too porous a nature. Well, the vines are planted thus, and probably in a year or two they may show some fruit, and in all probability some of them marked at the bottom of the rafters "Black Hamburgh," or "Muscat of Alexandria," will prove to be something else not better perhaps than the common Isabella of the garden. [Our correspondent presents a picture of a very low state of knowledge in vine culture, which we hope is not drawn from the life, as that culture is usually seen on New-York island. On the whole we think the management of vineries is well understood in this country, and there are hundreds, especially about Boston and Philadelphia, where foreign grapes are grown in the highest perfection. Ed.]

I will close these few remarks by saying, drain (if required) and well prepare your borders, procure from a respectable nursery, or some other reliable source, a few only of the best and well known varieties, (as there are not more than 6 or 8 sorts that are worth house room,) employ a skilful practical man to take care of them, and then I think we shall not hear of so much chagrin and disappointment in this department of horticulture. Respectfully yours, *Vitis*. *New-York, May* 15, 1850.

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Native Botany.—I was much disappointed on my arrival in this country to find that comparatively few of its inhabitants look into its indigenous floral beauty; few penetrate the woods to observe the lovely grandeur of Flora's territory. A few days ago I found in a wood, in the vicinity of this city, *Philadelphia*, what to me was a rich treat, having been more accustomed to pluck the weeds which are to be met with in the British Isles. I first observed in flower on the 21st of April, *Sanguinaria canadensis* or Blood root.—This plant presents a pleasing appearance, and is quite abundant. It has marked medical properties, varying from the quantity *exhibited*—of the order *Ranunculaceæ*, or Crowfoot tribe. I observed *Ranunculus hirsutus* and *rhomboidea;* also *Caltha palustris* and *Thalictum anemonoides*, the latter a very singular species, and likely to mislead the novice in Botany. The *Hepaticas* are still in flower. I found a white variety growing alongside the blue. *Podophyllum peltatum* will flower in a few days. This is known as the "May apple," has a sub-acid fruit which is eatable and is called Wild Lemon also. The other portions of the plant are cathartic. *Isopyrum fumanoides* is also here a very delicate plant, just showing its little cluster of flower buds. The *Claytonia virginica* (order *Portulaceæ*) is in full flower, and in great abundance. Also *Chrysospleneum* or Golden saxifrage, easily overlooked, but not less curious on this account. The *Saxifraga alba* is in fine condition for specimens. All who admire and would preserve specimens of Nature's more delicate offspring should be stirring now; the flowers are fast unfolding and must be transferred to the Herbarium, for they will not linger long. Once there, we may view their shadow but the essence fades. Yours, &c., *Hortophilus*. *April* 22.

INSECT ON THE GRAPE VINE.—"The Horticulturist" has for some time past afforded me much pleasure and instruction. The work was recommended to me by Hon. S. YOUNG, of Ballston, whose *enthusiasm* in the cultivation of trees and flowers may be known to you.

The communications and inquiries received by you and published in the Horticulturist, constitute a very interesting part of the work, and the information sought and the subject of this communication may be useful to others.

Upon a recent examination of my hardy grape vines, which for some time previous, had given great promise of an abundant crop, to my great disappointment and mortification I discovered that the buds upon many of the vines had been almost entirely destroyed. At first I supposed "Jack Frost" some still night had touched them with his icy finger. I consulted my daily record of the thermometer and found that we had not had frost to injure them. I suspected at once that an enemy, heretofore unknown and unseen, had trespassed upon my rights. Upon more careful examination, I found that the buds had been *bored*, and the centre part was missing. I have a large number of grape vines, some of which for many years have produced large crops, and I had never before discovered such an attack upon them. I resolved to hunt up the *enemy*. At length I caught *him* busy at his trade—a small green bug. I send you a *pair* of the *rascals*. Do you know him? I presume they will reach you alive and *kicking*. They are quick on the wing and have locomotive power not only on foot, but by a peculiar *jerk*, somewhat after the manner of the "*snapping bug*," so called. Can you inform me *how* and *when* to guard my vines from their attack? They are found in pairs. I noticed that the young vines had not been attacked, and also that the buds upon branches of the old vines which rested upon or near the ground had escaped.—The Isabella had suffered more than other vines.

If you can give me any information in regard to this new *enemy* to the vine in your June number, I shall be thankful. I am truly yours, &c., *Thomas M. Howell*.

ANSWER.—The insect reached us alive. It is the grape-vine flea-beetle (Haltica chalybea) We have never seen this species in a living state before, nor have we seen its ravages, but the insect (a small glossy, greenish-blue beetle, about three-twentieths of an inch long,) is accurately described by DAVID THOMAS, in the 26th vol. of Silliman's Journal of Science, and also noticed in Harris' Treatise on Insects. It appeared in great quantities in Cayugo co., N. Y., according to Mr. T. in 1831, and the same season was seen in great numbers in New-Haven, Conn., doing, in both places, great mischief by eating out the centre of the buds and destroying them. The habits of the insects are not yet perfectly understood. Mr. THOMAS thinks it undergoes its final transformation in the ground, coming out to attack the buds in May. The beetle lays its eggs on the vine. These change to "small chestnut-colored, smooth worms," that feed on the leaves of the vine in summer and pass the winter in a larva state, in the ground, coming out perfect beetles in the spring.

Assuming this to be correct, the best remedy is to destroy the insect when in the worm state; it is found upon the leaves in summer, by syringing the leaves with tobacco water. Next, look over the vines carefully in March, or before the least vegetation commences in the spring—strip off all the old or loose bark and white-wash the entire plant (which of course has been previously pruned,) buds and all, with a mixture of white-wash and sulphur—a pound of the latter to a pail-full of the former. This will *deter* the insect from boring the buds. Next to this we should say dusting the buds with powdered lime, while the dew is upon them in the morning would be the best remedy. This is recommended by HARRIS. Of course the most effectual way of getting rid of the pest is to destroy it in the worm state, with tobacco water.—*Ed.*

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PRACTICAL SCHOOL FOR GARDENERS.—In your leading article in the April No. of the Horticulturist, you express your regret at the non-existence of a practical school for gardeners, wherein their knowledge of European gardening might be remodeled to suit the climate. You go on to say, that the difficulty of getting foreign gardeners to enter this school would be removed by the readiness with which they could get from 50 to $100 a year more than they do at present, after spending 1 year there, and having its certificate to produce.

I assure you that to the uninitiated your suggestion looks well on paper—but men like me, who have spent ten summers here, and know something of the liberality of American employers generally, would not be caught by the golden vision you hold out. I am personally acquainted with a dozen gardeners who live with some of the first merchants in New York city—they give their employers entire satisfaction, and yet $30 per month (and many of them only $25) is the most any of these gentlemen will pay—while these same merchants pay the porters in their stores from 35 to $40 per month for the very scientific process of sweeping out the store and nailing up a packing box. There is an intimate friend of mine who gave up the trade last summer, and is now getting $35 per month in a hardware store in Maiden Lane, N. Y. Would it not be better for a gardener to be in the New York police at $600 per year than live with one of your aristocratic neighbors on the banks of the Hudson for 300 or $360 per year? I mention these facts to show at what a discount the science of gardening is at, in these United States. In a country like this, where the chances of doing better are so numerous, it would

be absurd to suppose that practical gardeners coming to this country would spend a year in your preparatory garden. How is it, Mr. Editor, that our enterprising American young men never try to become gardeners? The answer is quite simple—the wages they would get when they had acquired a knowledge of the profession, do not come exactly up to their ideas of making money, and any thing that your genuine Yankee don't make money at, there is no use in Europeans trying. The science of gardening is left to us Europeans, and very often Americans, whom we have taught the little they know, turn round and be our critics. I think I can show that your lament about the scarcity of good gardeners among us is imaginary. How is it that our leading commercial gardeners never have any difficulty in getting first class men? The reason is obvious—they know how to appreciate talent. The rivalry of trade compels them to employ the best gardeners, which they do, and pay them in round numbers just double the wages per year that your aristocratic neighbors pay their men. Then take our liberal and enterprising amateurs—Caleb Cope and James Dundas of Philadelphia, Mr. Cushing and Col. Perkins of Boston, and Mr. Becar of New York—have they any difficulty in procuring first rate men? A visit to their places will answer the question. These gentlemen pay the very highest wages, and furnish their gardeners with every facility for displaying their talents.

Now, Mr. Editor, these gentlemen find as good gardeners as they want, (all Europeans.) Their science has been all acquired without passing through your preparatory garden, and I see nothing in the way of every employer in the country to go and do likewise. To an intelligent gardener a residence of two years in our climate gives him a thorough knowledge of how to proceed. It matters not where you place a scientific gardener —whether at Cape Cod or the Cape of Good Hope—whether in a moist climate or a dry one—he will very soon learn how to combat the difficulties that surround him, the theory being the same. All he has to do is to shape his practice to the climate.

That the country is flooded with half gardeners I will readily admit, but who has called them into existence? It is the parsimonious employers, with whom the greatest qualification they can produce is, that they will work cheap. My object in writing this communication, was to show that there are plenty of good gardeners in this country, and that the backward state of horticulture on this continent is to be attributed more to the illiberality of the employers than to a want of scientific knowledge among the gardeners; and a visit to the gentlemen's places that I have quoted proves the truth of Sam Patch's assertion, "that some things can be done as well as others." Your appeal for help to the Mass. Horticultural Society, I think will be made in vain—the funds of that institution, although ample, seem to be just enough to divide in prizes among its own members. Respectfully yours, *John Quinn. Ida Farm, Troy, N. Y., June* 19, 1850.

Answer. Mr. John Quinn has our thanks for the way he shows his colors and manages his guns, though he comes rather sharply into action.

We happen, fortunately, to know Mr. Quinn, and have seen what he can do with his proper weapons—in other words, that he is an excellent gardener. The best answer, therefore, to the position he takes, that really good gardeners cannot be found in this country, is to be drawn from the man himself—for we believe he has had higher wages for the past five years, by nearly one half, than the majority of gardeners get in this country—and solely because he is such a gardener as we would have our school send out.

We quite agree with him in his complaint that more than half the employers will not give a good gardener fair wages.* But this is owing to two causes—first, that the employers do not know what a good gardener is, and second, that there are hundreds of *professedly* good gardeners in America, who are almost good-for-nothing—but who offer to work cheap—and until there is some way of determining the value of what is offered, it is clear that those who are ignorant of it will be taken in. Hence, again, the utility of our proposed school. No doubt an able, clever man will quickly adapt himself to the climate—but as we happen to have had such in our own employment, and have lost many valuable plants while they were busy in this kind of adaptation, we think it would be better to have them acquire this at public cost.

The reason why commercial establishments, nurseries and the like, get the best gardeners, is that they send out to like establishments abroad and receive men of certified character. Few private individuals can do this, and have to take gardeners on their own showing. The school for gardeners would therefore benefit employers by sending out men with reliable testimonials, and would gradually raise the wages of competent gardeners, by forcing those who only call themselves such, to fall back into the ranks of day laborers. Ed.

Common Names of Wild Plants.—I know not how the Horticulturist would flourish without the monthly spice of your untiring correspondent Jeffreys. It is true, he sometimes seasons our dishes with assafœtida, and sometimes with rose-water, but then there is an air of honesty, earnestness, and sometimes of enthusaism about him, that every body likes. Besides, he seems to be an universal savant, for neither yourself nor your scores of correspondents can start a subject on

*The difference between being a porter in a store at 35 or $40 per month, and having to pay the increased expenses of life in a city, and having a much less sum in the country, with perhaps a house and garden free, must be taken into account. It is not what a man gets, but what he can save, that makes his profit.

which he is not ready to say at least a few words. As a general rule, too, his suggestions are much to the purpose, having often, to my mind, been the means of introducing new ideas and improved methods. It is true, that when his critique, on the subject of deep growing roots, left me to the tender mercies of Dr. STEVENS, I did not think he had got to the *root* of *that* matter; but now, when he thinks "I deserve a gold medal," for having talked up to the mark about Indigenous Flowers, I cannot but admire his taste and knowledge. Such is human nature.

And now for his suggestion of giving the common names of my indigenous list. I think this is a timely as well as a reasonable hint, and therefore, as far as the plants *have* common names, shall give them, and I hope in season for the next number. Where there are several species, the name of the genus will perhaps be sufficient.

Acorus—*Sweet-flag.*
Acer—*Maple.*
Aristolochia—*Snake-root.*
Apocynum—*Dog's bane.*
Aquilegia—*Columbine.*
Actæa—*Bane-berry.*
Arbutus—*Bear-berry.*
Asclepias—*Milkweed.*
Aster—*Star-flower.*
Coptis—*Goldthread.*
Caltha—*Cowslip.*
Cornus—*Dog-wood.*
Clematis—*Virgin's bower.*
Convalaria—*Solomon's seal.*
Clethra—*Sweet pepper.*
Ceanothus—*Jersey tea.*
Cypripedium—*Ladies' slipper.*
Dirca—*Leather wood.*
Epilobium—*Willow-herb.*
Equisetum—*Scouring-rush.*
Gentiana—*Soapwort gentian.*
Gerardia—*Yellow Gerardia.*
Hamamelis—*Witch hazle.*
Habenaria—*Orchis.*
Hepatica—*Liverwort.*
Kalmia—*Laurel.*
Lilium—*Yellow and red Lily.*
Lysimachia—*Loose strife.*
Ludwigia—*Seed-box.*
Lobelia—*Cardinal flower.*
Liatris—*Gay-feather.*
Leptandria—*Culver's physic.*
Lygodium—*Climbing Fern.*
Mimulus—*Monkey Flower.*
Myrica—*Bay berry.*
Nymphæa—*Pond Lily.*
Osmunda—*Flowering Fern.*
Prinos—*Spotted Alder.*
Pyrola—*Winter-green.*
Rhodora—*Canadian Rhodora.*
Rhododendron—*Swamp-pink.*
Salix conifera—*Cone-bearing Willow.*
Staphylea—*Bladder-nut.*
Spiræa—*Hard-hack.*
Sarracenia—*Side-saddle flower.*
Sagittaria—*Arrow-head.*
Solidago odora—*Sweet golden-rod.*
Typhia—*Cat's-tail.*
Thalictrum—*Meadow-rue.*
Triosteum—*Fever root.*
Trillium—*Trillium.*
Tephrosia—*Cat-gut.*
Verbascum—*Moth mullein.*
Viola—*Bird's foot violet.*
Virburnum—*Maple-leaved virb. Arrow-wood.*
Vicia cracca—*Tufted vetch.*

I might extend this list quite readily by extracting from that of Mr. GREENE, of Boston, published in your May number. He has added several fine specimens, and among them *Calypso Americana, Sabbatia chlorloides, Panax quinquefolia*, all of which I should like to have by way of exchange. Yours truly, *J. L. Comstock. Hartford, June* 6, 1850.

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NOTES ON GRAPE CULTURE.—Notwithstanding all that has been written and is daily appearing on the culture of the grapevine here, there is a lack of information as to its general management every where around us; as well with people of high practical pretensions as with the mechanic and farmer. It is for the latter, and not for proficients that I venture to become a contributor to your Journal. I shall not refer to any of the modes adopted in scientific works and extensive vineyards, but to that which is seen every where at the mechanic's cottage and the farm-house. Our people all plant grapes for two essential objects, viz: Shade and fruit; but ere many years elapse the vines become stunted and feeble, the fruit *shanks* and shrivels, and nothing but shade can be obtained. The cause of this may be justly attributed to two prevailing evils, want of proper manure and bad management.

The great relish every body has for this fruit in our warm climate, not unfrequently induces the majority of our people to forfeit quality for quantity. In endeavoring to achieve this object they seldom cut out any but the extreme tops of the branches in the winter pruning, while in summer every eye is left to bear shoots, and every shoot to ripen all the fruit it shows. In this confused state they become, by the end of summer, a complete mass of worthless, ill-flavored fruit, and useless, half-ripened branches. Others boast of treating theirs something more scientifically, in attempting to prune on the spur system, but with equally bad results.

The manner in which it is performed, almost without exception, being this; the main branches being once established, they keep shortening the young shoots, year after year, till in a single spur there are several years wood, looking more like so many antlers than any thing else.

This is one of the principle causes of *shanking* and shriveling, and the older those spurs are the more will those diseases increase; hence the necessity of making a proper reserve in the summer dressing, and the sooner it will be now attended to the better. There is little or no difficulty in selecting a due supply of young shoots at this season. Those nearest the main branches should be prefered; if growing from the main branch so much the better, for it is such that always bear the largest and best fruit. All superabundant and useless branches should be cut away; even your favorite old spurs can be cut now with as much safety as in the fall (besides gaining a season's growth,) tying the young shoots to their places to become the bearing wood of the next year, and nipping all laterals they produce *above the first eye*, and not cutting these laterals entirely away as too many do.

This is a point seemingly but little understood, and to which I would like to call special attention, for this reason, that when the *laterals* are cut clear away the principal eye will soon break again, and exhaust itself in the production of useless branches. After a few years of this injudicious treatment it will be denounced as a barren and worthless variety, and the plant vender of whom it was purchased, will get his share of the blame.

Those wishing information on the manure best suiting the vine can consult the articles on special manures in the Horticulturist. *Fidelius.*

ANSWERS TO CORRESPONDENTS.

PRUNING YOUNG TREES.—*A Canada Nurseryman*, (Toronto.) We prefer early summer pruning for all young trees like those you refer to. The branches then heal over rapidly, without attention. You may prune with safety at any season if you apply to the wound the shellac mixture given in our *Fruits* and *Fruit Trees;* otherwise the wounds (except in early summer,) are liable to decay, especially in a northern climate.

LINDEN TREES.—*Two Subscribers*, Boston.—The spotted leaves of this tree like those you sent us we have seen before. They appear to us to be affected by a disease of the cuticle or outer covering of the leaf—owing, as we think, to some defect in the soil, as we have never observed it in *deep*, rich soils, which this tree prefers. The best remedy is to dig a trench two feet deep and as wide as you can afford, around the outside of the ball of roots, and fill it with rich soil—rather retentive of moisture, with a little salt sprinkled through it—say at the rate of half a peck to a trench for a tree 15 feet high. The autumn is the best time to do this.

PEAR BLIGHT.—*J. W. J.* (Philadelphia.) We think the foliage you sent us discolored by a species of fungus—perhaps induced to fix itself upon them by a diseased condition of the trees. Slack fresh lime with brine, mix it with about five times its bulk of soil, and let it lie for a fortnight, then apply it as a top dressing to the roots at the rate of half a peck of lime to a small tree just beginning to bear, and half a bushel to a full-grown or old tree.

GRAPE VINE.—*H. L. S.* (Geneva, N. Y.)—You should have cut your vine down to *one* strong bud (or rubbed off all the others,) when you planted it. It will answer now if you let but one shoot grow to each rafter, pinching off all the others.

ELM TREE INSECTS.—*H. A. Wright*, (Newport.) The insect which infects your elm trees is we presume the canker worm. To prevent their attacking the trees they should have a belt or girth of coarse canvass or cloth closely wound round their trunks, and smeared with fluid india-rubber. To make it fluid burn a pair of old overshoes over a gallipot or pan, (into which it will fall drop by drop before a very hot fire,) where it will remain fluid. It is so sticky that the insects in crawling on the trunk will be caught and captured.

RASPBERRIES.—*W. W.* (Salem, Mass.) Your crop has failed for two years past because the plants have been so long on the same soil that they have exhausted it. Make a fresh plantation in another part of your garden—trenching in a little plaster and a plentiful dressing of ashes before hand.

CHINESE WISTARIA.—*X. Y. Z.* (Buffalo.) No plant is more easily propagated. Take down some of the long shoots of the present year's wood immediately—bury a portion midway between the root and end under the surface, wounding the bark here and there a little with the knife when covered with the soil, and they will root finely by next November. July is the best month for making layers of roses or any hardy shrubs.

RHODODENDRONS.—*A Beginner*, (Newark, N. J.) You will find it not difficult to cultivate those plants if you will choose a shady border on the north side of a fence or in the shade of trees; though in the latter case the roots must be cut off the trees or they will exhaust the soil too much. If your soil is heavy mix peat earth well decomposed, and coal ashes with it.

BUDDING.—*W. Thompson*, (Clinton co., N. Y.) The plum fails usually because it is left too late. It should be inoculated the first moment the buds begin to be firm—which with you will be about the fourth of July. Roses should be budded immediately.

CAPE JASMINES.—*A Lady in New-England.*—Your plants are sickly because they have not the right soil. Send into the woods, get a basket full of the rich mould under the decaying leaves, and mix it with about a third white sand and a handful or two of fine charcoal, and shake off a good deal of the old soil from the roots and repot them in this compost. They should be kept in summer in a half-shaded spot.

PEACH TREES.—*W. Mayer*, (New-York.)—Your peach trees have the yellows, and the better thing would be to dig them up and burn them. Get a fresh stock from some district of the country where the trees are sound and healthy. The seedlings from the stone this spring will be fit to bud in September.

CHERRY SEEDLINGS.—*W.*, (Chicago.) If you wish to be sure of the vegetating of the cherry stones next spring you must sow them directly after they are gathered. Plant them in drills, like peas, about an inch deep, and cover the surface of the ground with hay, straw, litter, tanbark, or whatever other mulching is most conveniently obtained. Seedlings from Morello (pie cherries,) do not make good stocks for working on. The black Mazzard or "common Black English cherry" is preferred.

CARNATIONS.—*M. T.*, (Baltimore.) Make the layers as soon as possible after the flowers have faded; and in order to secure their forming an abundance of roots you should water them every evening. Cover the surface of the soil with a little new-mown hay to keep it cool.

BRUGMANSIA.—*J. P. W.*, (New-York.) The plant you describe as the double white Datura, is known as the *Brugmansia Knightii*—and, grown in a large tub or turned out in a rich border in summer, is one of the most showy of exotic shrubs. It is easily obtained of the principal florists and grows readily from cuttings.

NATIVE GRAPES.—*Vitis*, (New-Bedford.) We

are familiar with the native white grape you speak of. It is the Early Fox grape, and though reddish amber color in the sun, is pale green in the shade. But few berries are borne in a cluster. We assure you this grope is too "foxy" in its flavor, and has too firm a pulp to be tolerated by good judges. It however, makes a delicious jelly.

PENNSYLVANIA HORTICULTURAL SOCIETY.

The stated meeting of this society was held in the Chinese Saloon on Tuesday evening, June 18, 1850. The president in the chair.

Premiums awarded on the occasion were,—by the committee on plants and flowers,—pinks, for the best six, to William Hobson. Hot-house plants—for the best three specimens, to James Bisset, gardener to James Dundas; for the second best, to Maurice Finn. Green-house plants—for the best three specimens, to Maurice Finn. Collection of plants in pots—for the best, to James Bisset; for the second best, to Maurice Finn; for the third best, to Wm. Burnley, foreman to John Sherwood. Design of cut flowers—for the best, to Maurice Finn; for the second best, to Ben Daniels. Basket of cut flowers—for the best, to Ben Daniels; for the best bouquet of indigenous flowers, to Robert Kilvington. And special premiums, for a very large display of cut roses, three dollars, to Robert Buist; for two beautiful bouquet designs, three dollars, to Patrick Gallagher, gardener to Miss Gratz; for a handsome basket of indigenous flowers, two dollars, to Mrs Dr. Coleman, of Pemberton, N. J.

By the committee on fruits. Grapes—for the best three bunches, of a black variety (Black Hamburg,) to Ben Daniels, gardener to C. Cope; for the best three bunches of a white variety, to F'd'k Wolf, gardener to Mrs. Gambes, Montgomery county. Strawberries—for the best two quarts of a named variety, (Hovey's Seedling,) to Robert Lovelace, gardener to Mr. Warne, Frankford; for the second best ditto, (Hovey's Seedling,) to Anthony Felten; for the third best, (Moyamensing,) to Mr. Page, Burlington, N. J. Cherries—for the best three pounds, (May Duke,) to Isaac B. Baxter; for the third best, (Early Richmond,) to Wm. Hobson. And a special premium of five dollars to Ben Daniels, for eight varieties of grapes, three of peaches, and one of nectarines. The committee recommend to the notice of the meeting the following varieties of strawberries, viz., Methven Scarlet, Baltimore, Cushing, and six seedlings by Dr. Brinckle.

By the committee on vegetables. For the best display by a commercial gardener, to Anthony Felten; for the best display by an amateur gardener, to Ben Daniels, gardener to C. Cope; for the second best display, to P. Gallagher, gardener to Miss Gratz.

The corresponding secretary reported a communication, received from Dr. J. A. Kennicott, of Illinois, in acknowledgment for his election as an honorary and corresponding member.

Objects Shown.—*Plants*—By Ben Daniels, gardener to Caleb Cope, Stanhopea grandiflora, Ceropegia elegans, Brugmansia Knightii, Mimulus cardinalis, Scutellaria Ventenattii, Russellia juncea, Lantana crocea, Acropea Loddiesii, Justicia carnea, Achimenes longiflora, A. patens, Cuphea platycentra, oncidium sp., Fuchsia Napoleon, Hero, Lady Sale, Chauverii and Mirabilis.

By James Bisset, gardener to James Dundas, Æschynanthus Bosceanus, Zygopetalon, 8 Cuphea platycentra, 3 Achimenes sp., 8 Calceolariæ, 8 Verbenæ, 6 Fuchsiæ, Mathiola and 8 Violæ.

By Maurice Finn gardener to John Lambert, Pentas carnea, Ixora rosea, Gloxinia rubra, G. arborea, G. seedlings, Rondeletia speciosa, Hoya carnosa, Gnaphalium orientalis, Brugmansia floribunda, Calceolaria meteor, C. rugosa, C. seedlings, Hydrangeæ, Fuchsia Chauverii, F. exoniensis, F. rosea alba, F. fulgens, F. mirabilis, Correlina, Petunia, Pelargoniæ, Rosæ and Cinerariæ.

By John Sherwood's foreman, Cestrum aurantiacum, Fuchsia magnificent, F. beauty supreme, F. flavescens, F. conqueror, F. recurva, and 2 F. globosa.

By Patrick Gallagher, gardener to Miss Gratz, Agapanthus umbellatus, Lophospermum, Hydrangea hortensis, Veltheimia viridiflora, Begonia argyrostigma, B. parviflora, Petunia Duke of Bedford, Fuchsia Parson, Nymph, and Rosea, and Verbenæ.

By Robert Buist, roses, a great number of cut flowers, very fine, and of the choicest kinds.

By Wm. Hobson, choice pinks.

Designs and Bouquets.—By Maurice Finn, a design in form of a candelabra, bearing many beautiful bouquets. By Ben Daniels, a pretty design and basket. By P. Gallagher, a moss vase and cone bouquet. By Wm. Hobson, many bouquets. By Robert Kilvington, a basket of indigenous flowers. By Mrs. Coleman, Pemberton, N. J., a basket of indigenous flowers. By Tho. Meehan, a bouquet of indigenous flowers.

Fruit.—By Ben Daniels, gardener to C. Cope, the president. Grapes—Black Hamburgh, Victoria, Chasselas de Fontainbleau, White Tokay, Austrian Muscat, White Sweet-water, White Frontignan, and Muscat of Alexandria. Peaches—Early York, Melocoton and another. Nectarines—Elruge A display of great interest and of much admiration, alike creditable to the proprietor and gardener of Springbrook farm.

By James Bisset, gardener to James Dundas, a large dish of delicious nectarines.

By Fred'k Wolf, gardener to Mrs. Gambes, Montgomery county. Grapes—three large and fine bunches of the Malaga.

By Robert Lovelace, gardener to Mr. Warne, Frankford. Strawberries—Hovey's Seedling.

By Anthony Felten. Hovey's Seedling strawberries.

By Mr. Page, Burlington, N. J. Moyamensing—a seedling, brought into notice by the society last year.

By Isaac B. Baxter. Mayduke cherries and strawberries.

By Wm. Hobson. Cushing strawberries and Early Richmond cherries.

By P. Gallagher. Methven Scarlet and Baltimore strawberries.

By Dr. Wm. D. Brinckle. Strawberries—Taylor's Seedling and Necked Pine, of stock from Cincinnati, Seedlings Col. Wilder, Abyssinian Prince, Fanny, No. 286 A, No. 53 B, and No. 311 C.

Vegetables.—By Anthony Felten, an extensive display.

By Ben Daniels, gardener at Springbrook farm, a fine display.

By Patrick Gallagher, gardener to Miss Gratz, a handsome display.

By Maurice Finn, gardener to Jno. Lambert, a small display.

Tho. P. James,
Recording Secretary.

DESIGN FOR A SMALL INN.

PRINCIPAL FLOOR.